

WATERLOO METRO QUARTER

OSD: NORTHERN PRECINCT

LANDSCAPE & PUBLIC DOMAIN REPORT

SSD-10440
15th MARCH 2021
APPENDIX JJ

WMQ-BLD1-ASP-LS-RPT-001

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APPROVED BY	KL

ASPECT Studios



JOHN
HOLLAND

ASPECT Studios acknowledges the traditional owners of the land we work on and travel through and we pay our respects to elders past, present and emerging.

We acknowledge Country and pay our respects to the Gadigal people as the Traditional Custodians of the land in which the Waterloo development is situated.

We recognise their continued connection to Country and that this connection can be seen through stories of place and cultural practices such as art, songs, dances, storytelling and caring for the natural and cultural landscape of the area.

We acknowledge all the people, Indigenous and migrant, who contributed stories that we have incorporated into this document. We thank them for the knowledge of the broader Eora nation and the links of their stories to Waterloo.

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Executive Summary

This Landscape & Public Domain design report has been prepared by ASPECT Studios to accompany a detailed State significant development (SSD) development application (DA) for the Northern Precinct over station development (OSD) at the Waterloo Metro Quarter site.

This report has been prepared to address the relevant conditions of the concept SSD DA (SSD 9393) and the Secretary's Environmental Assessment Requirements (SEARs) issued for the detailed SSD DA (SSD 10440).

This report concludes that the proposed Northern Precinct OSD is suitable and warrants approval.

Introduction

This report has been prepared to accompany a detailed State significant development (SSD) development application (DA) for the Northern Precinct over station development (OSD) at the Waterloo Metro Quarter site. The detailed SSD DA is consistent with the concept approval (SSD 9393) granted for the maximum building envelope on the site, as proposed to be modified.

The Minister for Planning, or their delegate, is the consent authority for the SSD DA and this application is lodged with the NSW Department of Planning, Industry and Environment (DPIE) for assessment.

The detailed SSD DA seeks development consent for the design, construction and operation of:

- 17-storey commercial building (Building 1) comprising Commercial floor space, with an approximate capacity of 4000 workers
- ground level retail tenancies, loading facilities serving the northern and central precinct including Waterloo metro station
- landscaping and private open space at podium and roof top levels to support the commercial tenants
- new public open space including the delivery of the Raglan Street Plaza, Raglan Walk and expanded footpaths on Raglan Street and Botany Road and public domain upgrades
- external licensed seating areas
- signage zone locations
- utilities and service provision
- stratum subdivision (staged)

- This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated April 2020 and issued for the detailed SSD DA. Specifically, this report has been prepared to respond to the SEARs requirements summarised below.

ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)	
4. Design Excellence and Built Form	
<i>demonstrate compliance with the endorsed Design and Amenity Guidelines, dated March 2020 or any subsequent endorsed revision of the guidelines.</i>	Refer to Design and Amenity Guidelines Compliance Table
5. Integration with Sydney Metro Station Infrastructure	
<i>show how the SSD will integrate with the CSSI infrastructure such as structural design, detailed architectural approach, access, wayfinding, public domain works and construction management.</i>	The public domain has been designed as a whole precinct with no visible boundaries between station and OSD works. The design allows for seamless movement between the station and other parts of the precinct in a safe and legible public domain.
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include the following:	
<i>public domain plans defining extent of works (if any proposed) landscape design statement and plans</i>	Refer to Package of SSDA Landscape Plans and schedules along with the Landscape and Public Domain Design Report.
9. Traffic, Parking and Access (Construction and Operation)	
In addition, the EIS must include the following:	
<i>details of measures to segregate hostile vehicles from public transport users and areas of people congregation.</i>	Hostile vehicle mitigation elements have been incorporated into the public domain to protect areas of mass congregation and critical station infrastructure. These elements include bollards, walls and planter boxes which have been designed to allow flow of pedestrians throughout the precinct and protection from hostile vehicles.
<i>demonstrate how pedestrian safety and amenity will be provided along Raglan Street, the shared laneway located between Raglan Street and Cope Street plaza will be designed to prioritise pedestrian movements, including any measures to protect pedestrians entering and exiting the building and retail outlets.</i>	Following a detailed safety risk review, areas of potential mass congregation and critical station infrastructure have been designed to prevent vehicular access. This includes the public domain outside the northern entry to the station on Raglan St, the shared laneway between Raglan St and Cope St Plaza, pedestrians using the shared driveway, Grit Lane, the southern station retail tenancies and Cope St Plaza.

The Site

The site is located within the City of Sydney Local Government Area (LGA). The site is situated about 3.3 kilometres south of Sydney CBD and eight kilometres northeast of Sydney International Airport within the suburb of Waterloo.

The Waterloo Metro Quarter site comprises land to the west of Cope Street, east of Botany Road, south of Raglan Street and north of Wellington Street (refer to Figure 1). The heritage-listed Waterloo Congregational Church at 103–105 Botany Road is within this street block but does not form a part of the Waterloo Metro Quarter site boundaries.

The Waterloo Metro Quarter site is a rectangular shaped allotment with an overall site area of approximately 1.287 hectares.

The Waterloo Metro Quarter site comprises the following allotments and legal description at the date of this report. Following consolidation by Sydney Metro (the Principal) the land will be set out in deposited plan DP1257150.

- 1368 Raglan Street (Lot 4 DP 215751)
- 59 Botany Road (Lot 5 DP 215751)
- 65 Botany Road (Lot 1 DP 814205)
- 67 Botany Road (Lot 1 DP 228641)
- 124-128 Cope Street (Lot 2 DP 228641)
- 69-83 Botany Road (Lot 1, DP 1084919)
- 130-134 Cope Street (Lot 12 DP 399757)
- 136-144 Cope Street (Lots A-E DP 108312)
- 85 Botany Road (Lot 1 DP 27454)
- 87 Botany Road (Lot 2 DP 27454)
- 89-91 Botany Road (Lot 1 DP 996765)
- 93-101 Botany Road (Lot 1 DP 433969 and Lot 1 DP 738891)
- 119 Botany Road (Lot 1 DP 205942 and Lot 1 DP 436831)
- 156-160 Cope Street (Lot 31 DP 805384)
- 107-117A Botany Road (Lot 32 DP 805384 and Lot A DP 408116)
- 170-174 Cope Street (Lot 2 DP 205942).

The detailed SSD DA applies to the Northern Precinct (the site) of the Waterloo Metro Quarter site. The site has an area of approximately 5,120sqm. The subject site comprises the following allotments and legal description at the date of this report

- 1368 Raglan Street (Lot 4 DP 215751)
- 59 Botany Road (Lot 5 DP 215751)
- 65 Botany Road (Lot 1 DP 814205)
- 67 Botany Road (Lot 1 DP 228641)
- 124–128 Cope Street (Lot 2 DP 228641)
- 69–83 Botany Road (Lot 1, DP 1084919)
- 130–134 Cope Street (Lot 12 DP 399757)

The boundaries of the overall site are identified at Figure 1, and the subject site of the detailed SSD DA is identified at Figures 2 and 3. The site is reasonably flat with a slight fall to the south.

The site previously included three to five storey commercial, light industrial and shop top housing buildings. All previous structures except for an office building at the corner of Botany Road and Wellington Street have been demolished to facilitate construction of the new Sydney Metro Waterloo station. As such the existing site is predominately vacant and being used as a construction site.

The area surrounding the site consists of commercial premises to the north, light industrial and mixed-use development to the south, residential development to the east and predominantly commercial and light industry uses to the west.



Figure 1 - Aerial image of the site Source: Urbis

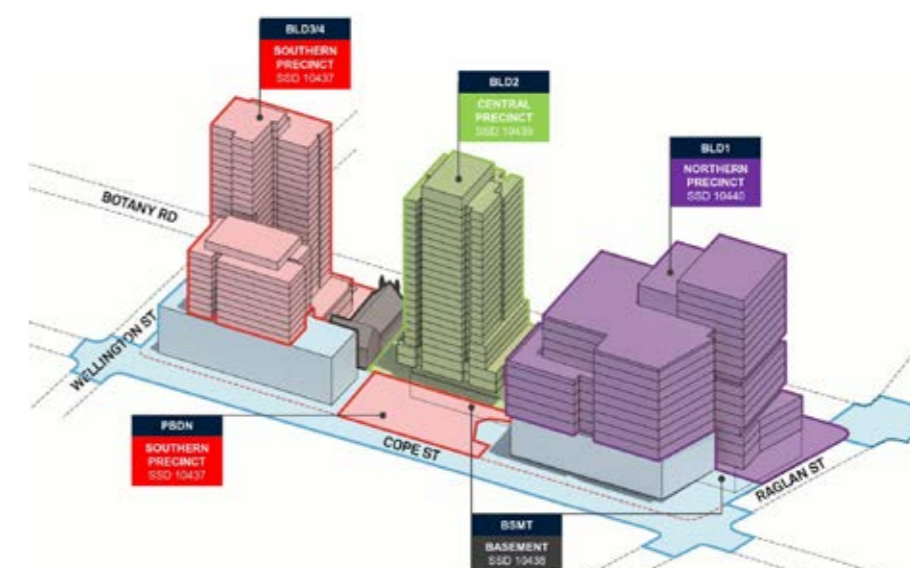
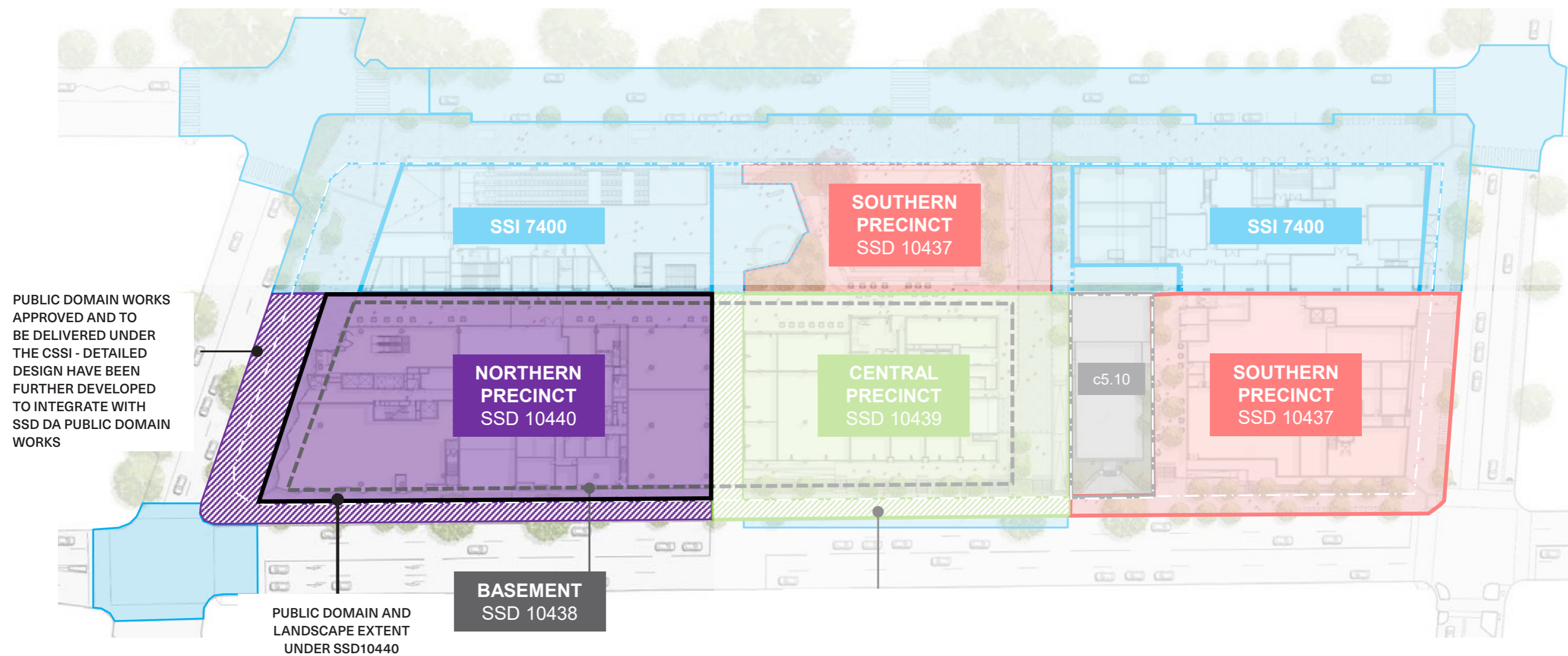


Figure 2 - Waterloo Metro Quarter site, with sub-precincts identified Source: HASSELL

Application Extent of Works

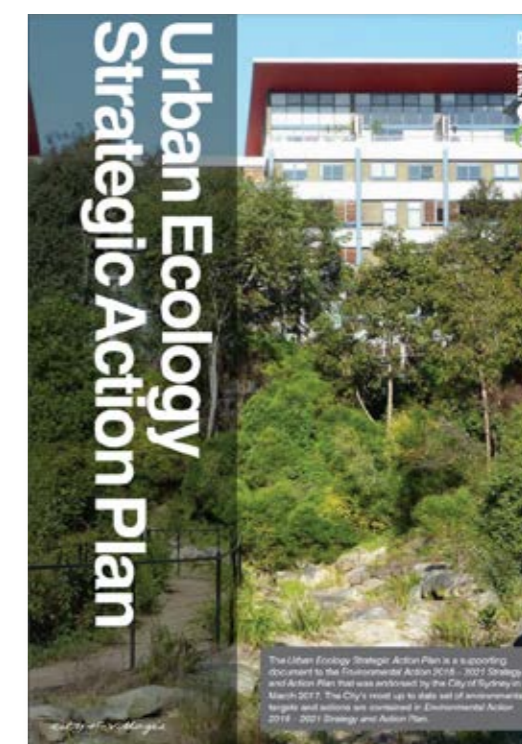
Figure 3 - Waterloo Metro Quarter site, with sub-precincts identified Source: Waterloo Developer Pty Ltd



Background Documents & Research

Consideration has been given to the following strategy documents:

- WMQ Design & Amenity Guidelines
- City Of Sydney Public Domain Guidelines
- City Of Sydney Cycle Network Strategy
- City Of Sydney Street Tree Masterplan
- City Of Sydney Urban Forest Strategy Canopy
- City Of Sydney Urban Ecology Strategic Action Plan





Section 1

WMQ Landscape & Public Domain Vision

Precinct Masterplan

Waterloo Metro Quarter will be a dynamic precinct within the broader surrounds of Waterloo comprised of public spaces including a neighborhood square (Cope Street Plaza), laneways (Ragan Walk, Grit Lane and Church Square), a courtyard (Church Yard) and surrounding streetscapes with generous footpaths and planting areas.

Raglan Street — Provision of generous circulation space around Metro and building entries. Creation of comfortable microclimate with shade trees and planting to cool street frontage. Permeable paving over deep soil. Predominantly native understorey planting provides opportunity for education through urban foraging.

Wellington Street — Extension of understorey planting in verge from western side of Botany Rd green connector to Alexandria Park. Weeping Lilly Pilly street trees, native understorey planting and bike parking integrated near cycle path - separated bike path proposed on road.

Cope Street — Provision of generous circulation space around Metro and building entries. Incorporates parking/taxi/kiss 'n ride with widened verge. Creation of comfortable microclimate with shade trees and planting to cool street frontage. New street trees are Corymbia eximia (Yellow Bloodwood) with native understorey

planting. Integration metro security elements and WSUD. Bike parking and benches located to provide amenity near Waterloo Place.

Botany Road — Provision of generous footpath widths along Botany Rd with new Lophostemon confertus street trees and native understorey planting that creates amenity and separation from the busy vehicular street. Double row of trees provided in areas with 10M setback.

Cope Street Plaza — Will be named through a competition open to the community and will provide a meeting place/neighborhood square/communal gathering area that showcases cultural artworks and stories. Located at footpath level, the square is subtly separated from the surrounding circulation zones and outdoor dining areas, creating a protected place for community use. Active building uses are edges to the square, making this an attractive space to be during day and evening. A small

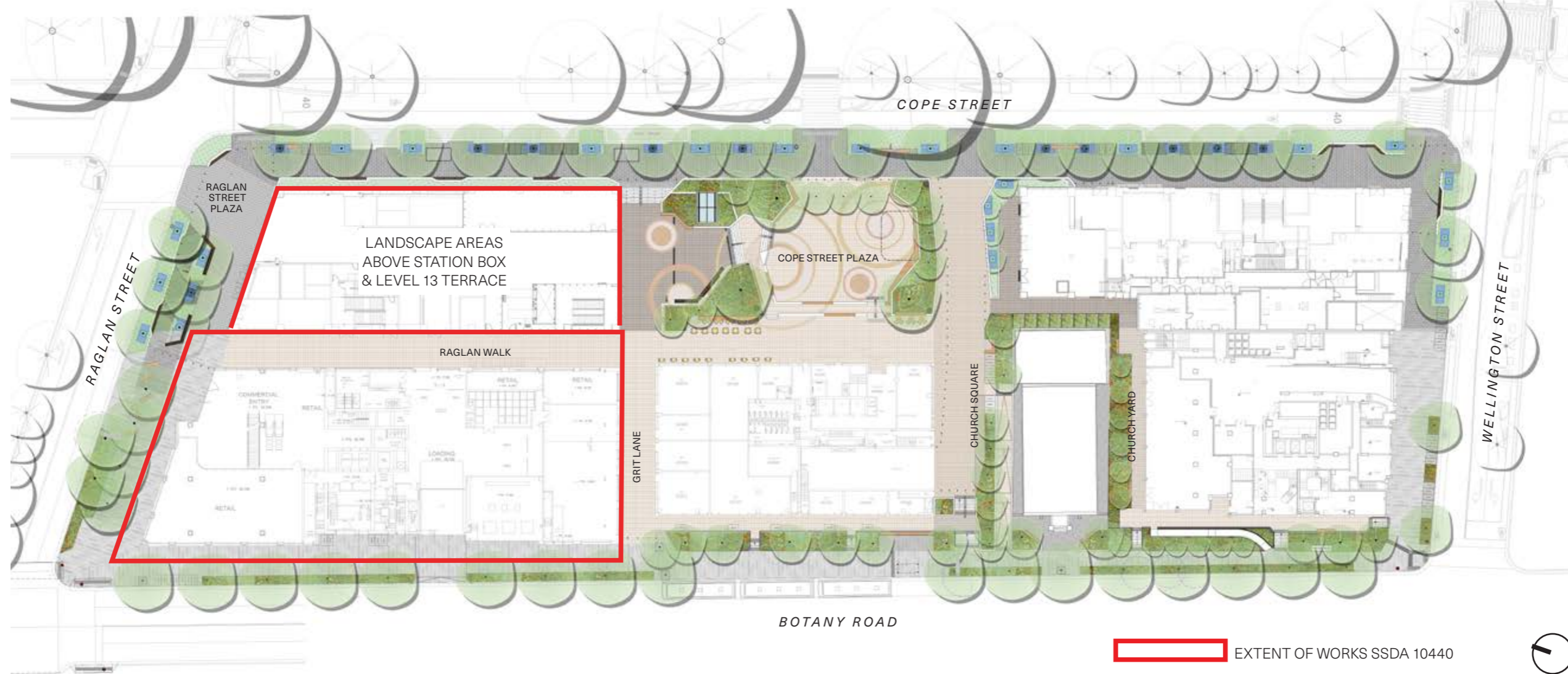
pavilion could provide a permanent place for markets/ busking/gathering linked to the original trade route walking trail now known as Botany Rd.

Raglan Walk — An important north south connecting laneway activated by adjacent building lobby, retail tenancies as well as Metro retail and bike storage.

Grit Lane — Will be used as a connector between the Metro southern entrance and Botany Rd bus stop. Activated by retail tenancies both sides.

Church Square — provides both pedestrian access across the precinct and vehicular access to the basement. Allows church facade to be exposed and contribute to character of the place.

Church Yard — A protected courtyard framed by the Church and the facade of the student accommodation building. Allows activities to flow out from the Church and Maker Space.



Culture & Placemaking Story

The public domain has been designed with an underlying narrative of responding to the long and layered history of the place. Responses to culture will be expressed through the design of the ground plane, planting, artworks, seating and embedded stories.

The Place Story developed for the project includes the following statement of the essence of the place:

THE WATERLOO ISD IS A PLACE OF 'UNCONVENTIONAL POTENTIAL' AN OPPORTUNITY TO BRING DIVERSE MINDSETS TOGETHER, CELEBRATE DIFFERENCE, AND EXPLORE A NEW ECONOMIC TOMORROW.

Ongoing collaborations will generate a meaningful sense of ownership and belonging, whilst unlocking community potential. It will be a place where convenience meets affordability, easily accessible within minutes from the CBD.

The public domain and landscape design has incorporated the four overarching Place Pillars identified through the work by Murawin and Brickfilelds that is detailed in the Place Story as per the extract below:

The Place Pillars describe the unique attributes that the Waterloo ISD can 'own' - defined by their evolving stories. These Pillars are drawn from an understanding that starts with 'the First Story, first'.

The Waterloo-Redfern area is culturally and historically significant for the Aboriginal people of Sydney, New South Wales and the country. These, and the contemporary narratives that follow, provides a foundation for the place story we are writing today.





To articulate how we will deliver each Pillar of the proposition to the community, the Pillars are described in terms of:

Experiential attributes - capturing character and emotional dimensions

Community benefits - the attraction or benefit provided to the community

Proof points - representations of our Place Pillars to the community

The following overview summarises the key features and proof points that will enable the delivery of the Place Pillars within the Northern Precinct (SSD10440).

<p>RESILIENT</p> <p>Diverse, accessible opportunities enable new cycles of prosperity through skills training, employment, entrepreneurship, health and wellbeing, spirituality and sustainability.</p>	<p>Community Benefits</p> <ul style="list-style-type: none"> _Sustainability _Employment _Wellbeing <p>Experiential Attributes</p> <ul style="list-style-type: none"> _Seasonal _Nurturing _Spiritual 		<p>Place</p> <ul style="list-style-type: none"> _Health services _Passive and responsive building design _Natural and recycled materiality <p>Programming</p> <ul style="list-style-type: none"> _Sustainability programs _Health and awareness raising _Evening activations
<p>REAL</p> <p>A place of formative experiences, where difference is celebrated and you can be your unfiltered self.</p>	<p>Community Benefits</p> <ul style="list-style-type: none"> _Learning from difference _Belonging _Transparency <p>Experiential Attributes</p> <ul style="list-style-type: none"> _Unassuming _Honest _Layered 		<p>Place</p> <ul style="list-style-type: none"> _Robust materiality _Design referencing industrial and mainstreet character <p>Programming</p> <ul style="list-style-type: none"> _Affordable retail rents _Independent retailers _Diversity of price points
<p>RECIPROCITY</p> <p>Healing and exchange fostering cultural practice, creativity, social justice, inclusion and economic participation.</p>	<p>Community Benefits</p> <ul style="list-style-type: none"> _Creative expression _Authentic exchange _Equity <p>Experiential Attributes</p> <ul style="list-style-type: none"> _Inclusive _Diverse _Co-curated 		<p>Place</p> <ul style="list-style-type: none"> _Collaborative work settings in retail/public facing settings _Celebration of sky and journey <p>Programming</p> <ul style="list-style-type: none"> _Ongoing transparent engagement _Workplace engagement programs
<p>CONNECTION</p> <p>New levels of convenience unlocked by the Metro station providing accessibility to ATP and the CBD, making this an appealing destination for local professionals.</p>	<p>Community Benefits</p> <ul style="list-style-type: none"> _Transport connectivity _Onsite amenity _Meaningful narratives <p>Experiential Attributes</p> <ul style="list-style-type: none"> _Seamless _Convenient _Relevant 		<p>Place</p> <ul style="list-style-type: none"> _Seamless transitions _Metro integrated bike hub _Ground plane permeability <p>Programming</p> <ul style="list-style-type: none"> _Meaningful place naming _Active laneways _Commuter convenience pop-ups



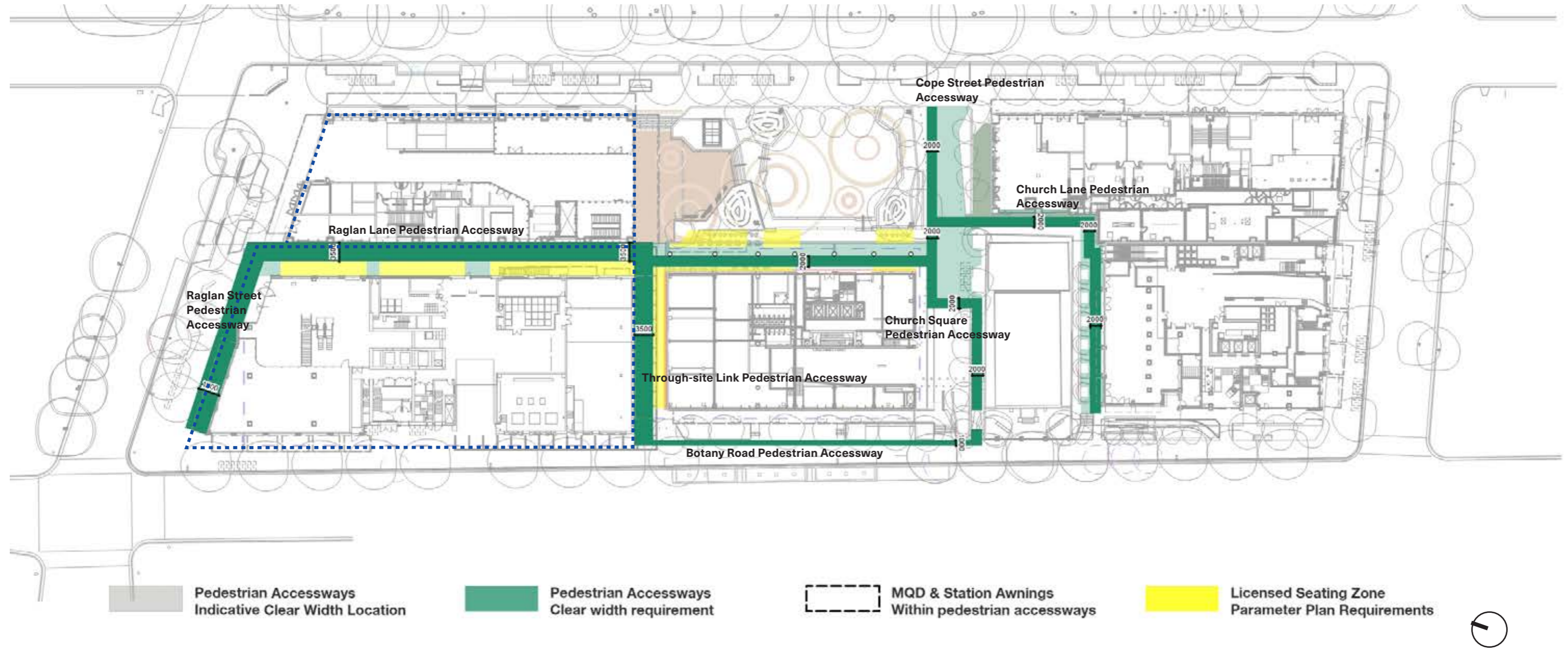
Section 2

Waterloo Metro Quarter Design Strategies

Pedestrian Accessways

In line with Annexure A to Schedule C1 - Waterloo Design Parameter Plans, clear pedestrian access has been considered throughout the site to maintain a safe and accessible journey for pedestrians. Clear widths have been adhered to and licenced seating zones are highlighted in yellow.

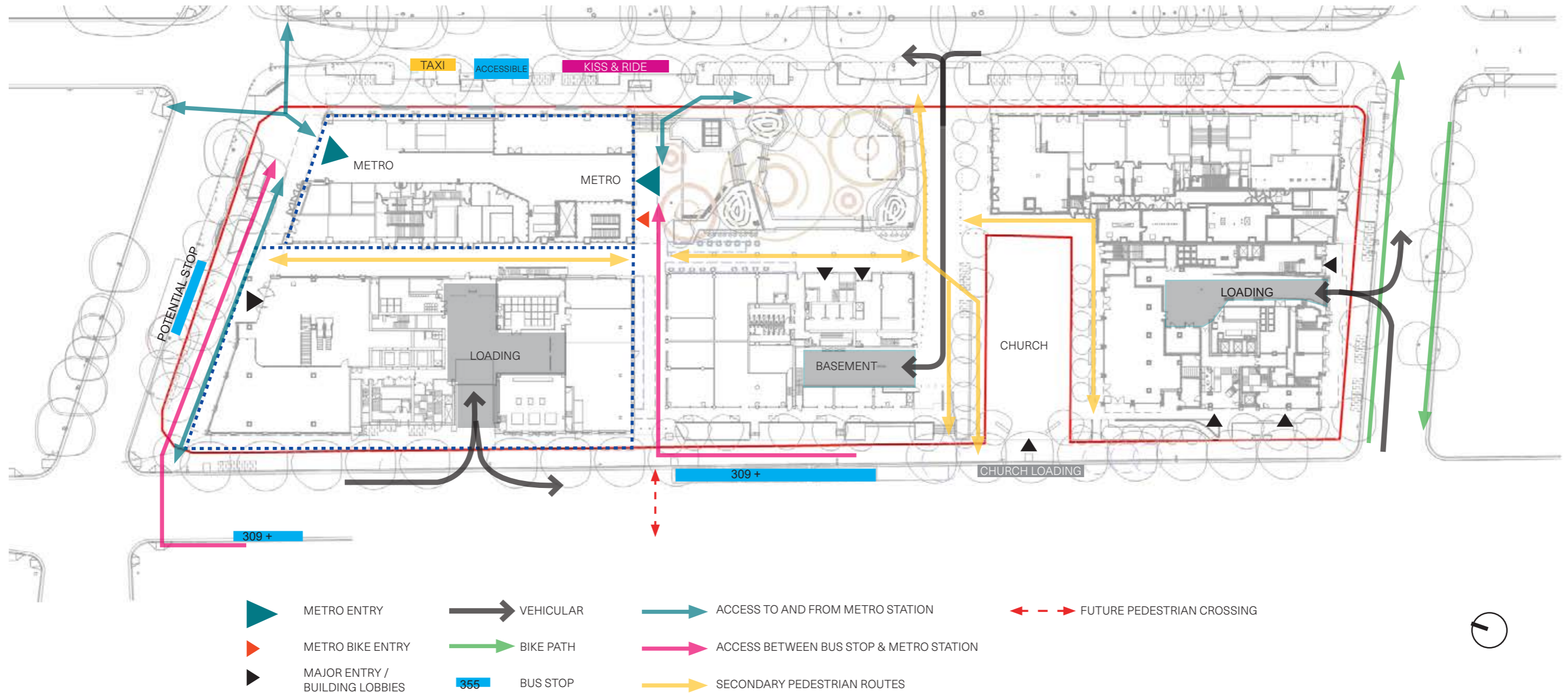
NORTHERN PRECINCT
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Access & Circulation

The station precinct establishes two new east-west pedestrian links from the bus stops on Botany Road to the station entry. Care has been taken with respect to providing safe paths of travel for people with a disability especially at the points at which the pedestrian paths of travel intersect respectively with the station entries.

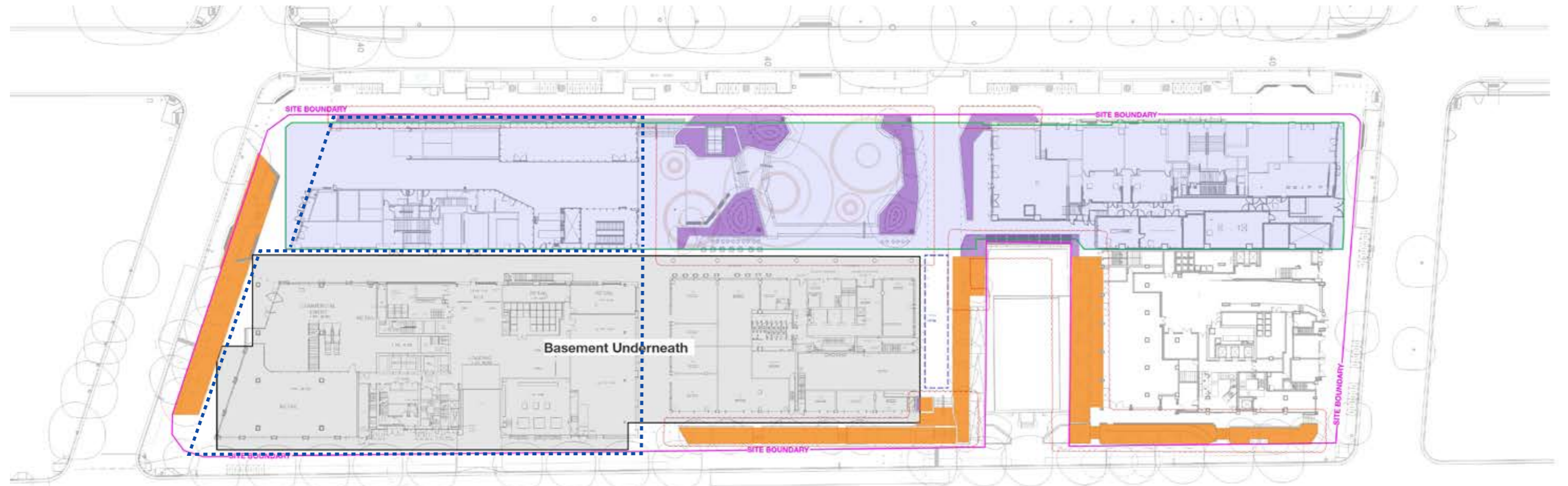
NORTHERN PRECINCT
EXTENT OF WORKS SSDA 10440



Deep Soil

The ADG minimum deep soil requirement is 7% and the City of Sydney minimum for mixed use / commercial developments is 10%. The proposals for Waterloo Metro Quarter basement have been designed to maximise deep soil area. Excluding the station box (in blue) the proposals achieve 10.8% deep soil coverage (in orange), exceeding the DCP targets and are therefore compliant with City of Sydney guidelines.

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Area	
	Total Site Area = 12871m ²
	Metro Box Area = 4683m ²
	Total Deep Soil Area = 891m ²
	Total Constructed Soil Area = 447m ²
Required deep soil % = 10%	

% CALCULATION 1 (METRO BOX EXCLUDED)
Total Site Area minus Metro Box Area = 8188m²
Deep Soil Area = 891m²
Deep Soil Area / Total Site Area minus Metro Box Area = 10.8%

% CALCULATION 2 (METRO BOX INCLUDED)
Total Site Area = 12871m²
Combined Deep Soil and Constructed Soil Area = 1338m²
Combined Deep Soil & Constructed Soil Area / Total Site Area = 10.4%

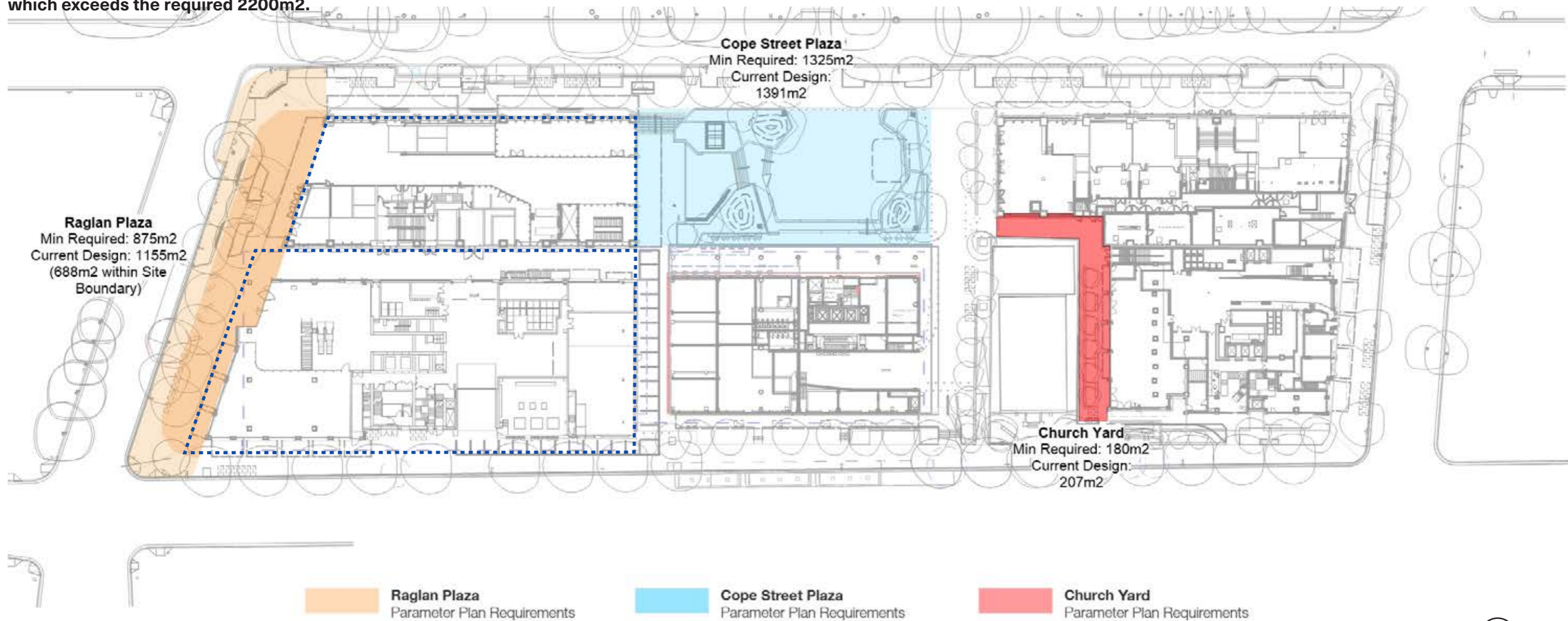


Spatial Compliance

As per the agreed WMQ Design Parameter Plans, Cope Street Plaza provides a minimum area of 1325m² of public open space. Raglan Street plaza provides 875m² of open space to the new station entrance and down to Botany Road.

The combined area of new public domain = 2680m² which exceeds the required 2200m².

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Tree Canopy Coverage

The WMQ Design & Amenity Guidelines 3E objective, highlights the important role tree planting plays to mitigate the impacts of urban heat island and their contribution to enhance biodiversity of the site.

The development must achieve the following minimum tree canopy cover targets:

50% STREET canopy cover (i.e. the combined area of all tree canopy contained within the road reserve including footpaths and pedestrian areas and measured from the property boundary to the centreline of the roads)

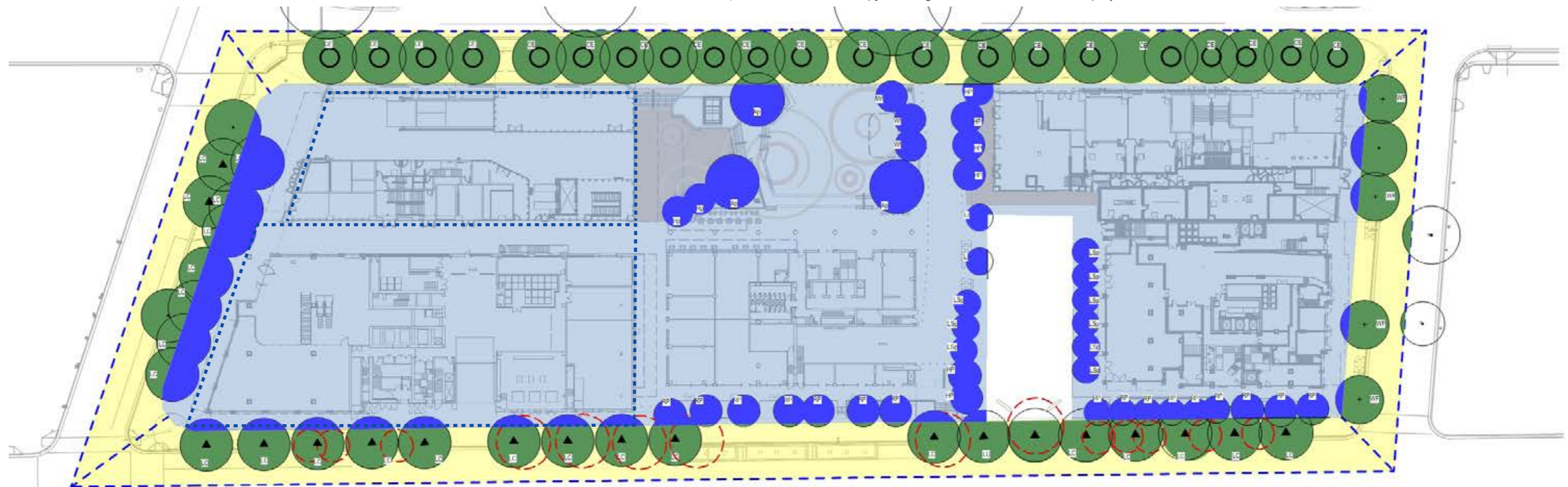
23% OVERALL canopy cover (i.e. the combined canopy area of all trees contained within the site and adjacent streets measured to the centre line of the roads)

In summary, the precinct wide proposals below demonstrate:

- **54.8%** - Street Tree Canopy Cover
- **12%** - Private Land Canopy Cover
- This equates to **25.7%** overall canopy coverage for the site.

The tree canopy coverage for streets and private land shown above exceeds the Design Amenity Guidelines Tree Canopy Coverage Criteria nominated for the project.

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ID	SPECIES	MATURE HEIGHT	MATURE CANOPY DIAMETER
LC	Lophostemon confertus	15m	10m
CE	Corymbia eximia	10m	10m
RP	Robinia pseudoacacia 'Vivia'	9m	8m
WF	Waterhousea floribunda	15m	9m
HP	Harpulia pendula	9m	8m
LSp	Lagerstroemia indica x fauriei 'Bliss'	8m	5m
LI	Lagerstroemia indica 'Red'	8m	5m
Ap	Alouyon pinnatum	15m	10m
BA	Braehyhton acerifolius	15m	10m

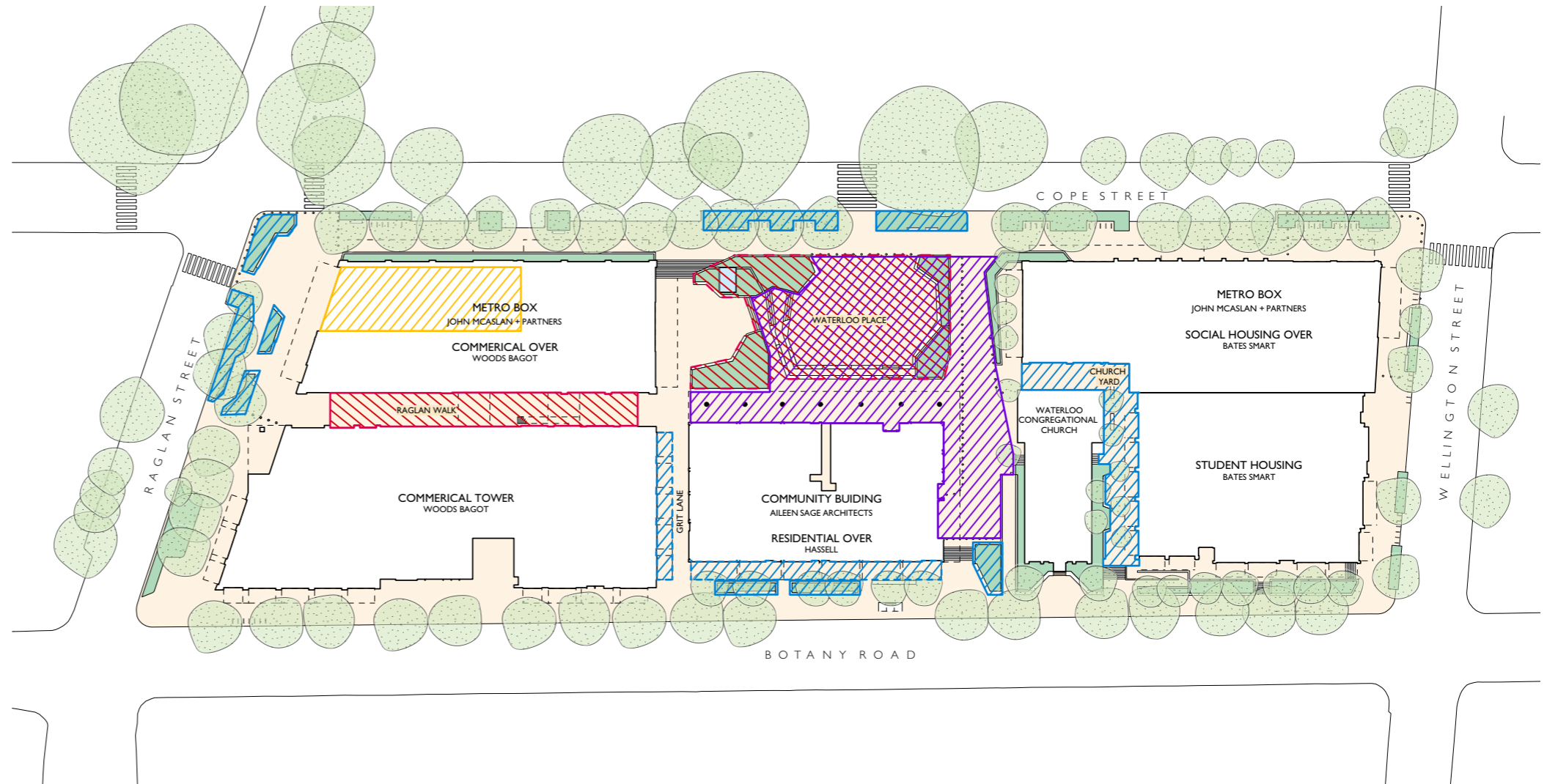
AREA	TOTAL AREA
Private	12800m ²
Street	6084m ²
Raglan Street	808m ²
Cope Street	2138m ²
Wellington Street	746m ²
Botany Road	2280m ²
Total	18952m²

TREE CANOPY ACHIEVED			
EXTENT	TYPE	AREA	%
GROUND LEVEL	Private	1557m ²	12%
	Street Total	3540m ²	54.8%
	Raglan Street	248.0m ²	62.7%
	Cope Street	1012.0m ²	70.7%
	Wellington Street	208.0m ²	30.8%
	Botany Road	1091.0m ²	45.8%
	GF Total	4812m²	25.7%

Public Art & Heritage Interpretation

Heritage Interpretation (App. DD) and Public Art (App. OO) strategies have been prepared for the whole site, refer to reports prepared by Urbis and Aileen Sage Architects respectively.

Through the process of developing the heritage interpretation strategy, four main themes have been identified for interpretation in the project. Themes 1, 2 and 3 will be incorporated into briefs for public artworks that will be commissioned for the project. Please refer to the Public Art Strategy for more detail of this process. The fourth theme will become a brief for a heritage interpretation consultant to design heritage interpretation elements. Material found during the archeological investigation prior to excavation of the site can be used to inform the design for theme 4.



PUBLIC ART LOCATIONS

- Metro Station art work
- Opportunity 1
- Opportunity 2
- Opportunity 3

Diagram by Aileen Sage Architects

Public Art & Heritage Interpretation



Celebrating Country



Celebrating Community & Language



Celebrating Innovation & Knowledge



Development of Urban Landscape

Theme 1

Celebrating Country

This artwork will be a two dimensional design or pattern that will be translated into the brick or concrete unit paving of Waterloo Place and the shareway area between Building 2 and the Waterloo Congregational Church. The work will be highly graphic and abstract, clearly demarcating these important civic zones and creating a strong visual character and marker of these public domain areas when viewed from a distance and from above, looking down from the residential, community and commercial buildings of the precinct and surrounds.

The work will acknowledge and celebrate the essential nature of the land that Waterloo sits on, above and within Aboriginal land. Land that has provided stories, skills, designs and cultural practices. Weaving patterns (from woven bags, baskets, and mats) will be developed by the artist, as well as interpretations of kinship stories or systems as patterns and designs.

Theme 2

Celebrating Community & Language

This commission will be in the local Sydney language as well as selected migrant languages including English, Mandarin, Arabic, and could include some European languages such as Italian, Greek, French and Russian and any other key languages considered important in responding to particular immigrant groups with strong relationships, historical and contemporary, with the area. It will work with poetry and storytelling to embed text within the site as illuminated, etched or integrated elements in key strategic places, speaking to identity, culture and community.

It will acknowledge the history of Aboriginal activism in the Waterloo /Redfern /Eveleigh area, the birthplace of Australia's civil rights movement and its continuing significance for the Aboriginal community, emerging communities with each new wave of migration, acknowledging also the stories of food production, industry, craftspeople and makers that at various times have contributed to the character of this area.

The locations of the work will be carefully considered and judiciously placed. The exact locations being determined in collaboration with the curators and the precinct design team during the Detailed Design Stage. These locations may include:

Theme 3

Celebrating Innovation & Knowledge

For this opportunity it is proposed that a series of sculptural elements either integrated with the landscape or suspended above would be commissioned extending from Raglan Walk through to Waterloo Place.

The work will celebrate the area's Aboriginal history and future with a focus on innovation, incorporating in particular ideas and practices celebrating Indigenous knowledge of the skies. Recognising a deep knowledge and understanding of the interconnection between our planet and the broader universe. Honouring the sky above us that unites us under the same blanket of stars.

The work will celebrate the (sometimes difficult) journeys migrants took from the northern hemisphere to the southern and the unifying use of stars as a way of finding place. Honouring the stories of the southern constellations and the ongoing research and innovations that continue to build on this ancient knowledge.

The work would commission a collaborative multidisciplinary team including artists working alongside an astronomer and tech innovation specialists to create an innovative and dynamic work which may include elements of dynamic digital programming and/ or illuminated elements that could be programmed to respond to particular site conditions /activities / astrological /seasonal /environmental conditions particular to the site

Theme 4

Development of the Urban Landscape

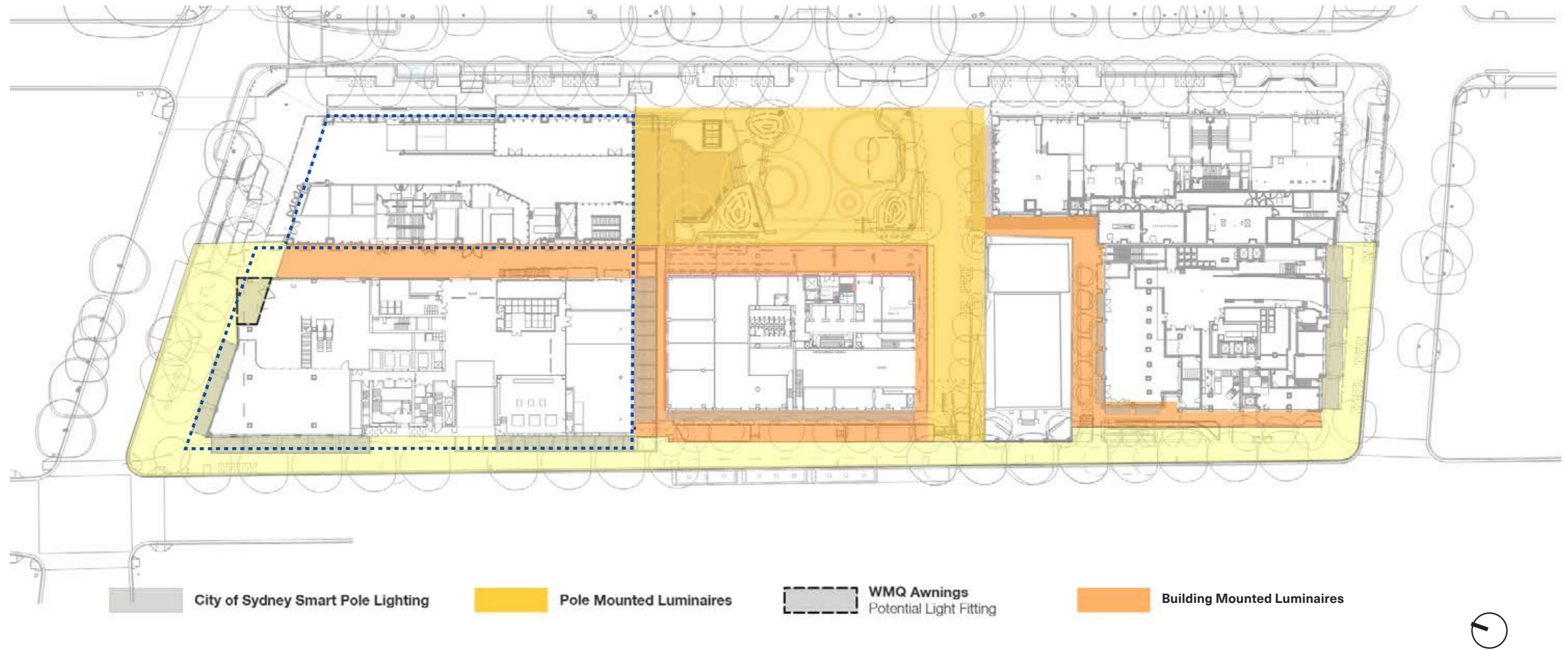
The overall development of the site from its original state as wetlands, Aboriginal evidence, early land grants, mills and market gardens, through to early residential subdivisions, light industrial and commercial uses before modern development.

Lighting Strategy

Lighting across the site to be designed to achieve a balance of safety and ambience, utilising a combination of pole mounted, building mounted, and feature lighting.



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Section 3

Northern Precinct Public Domain

General Arrangement: Northern Precinct

Introduction

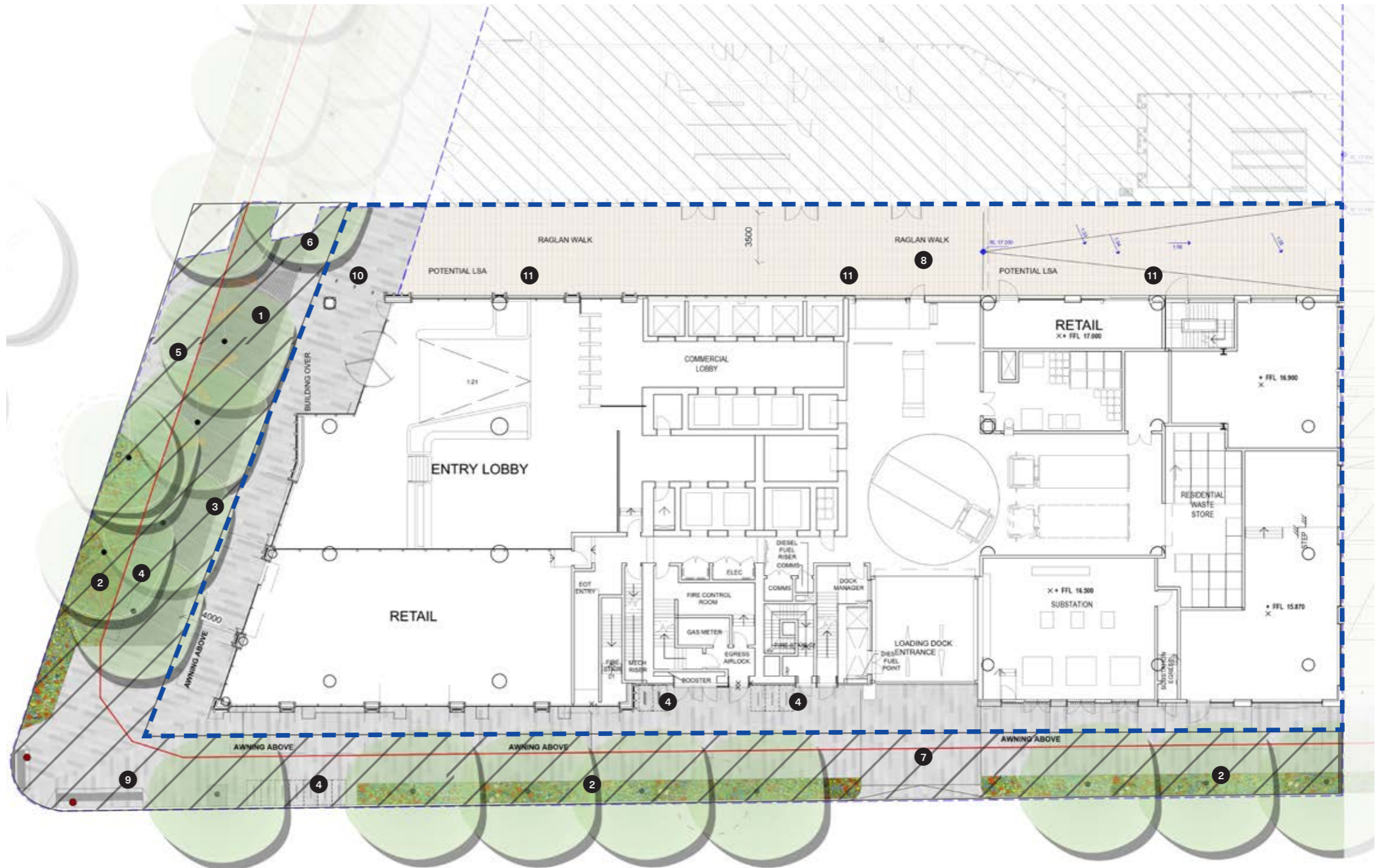
The southern end of Raglan Plaza is the main entrance to the commercial building and as such a provision of generous circulation space around Metro and building entries has been allowed to accommodate future pedestrian flows.

A comfortable microclimate with shade trees and ground planting to cool the street and provide a verdant frontage along Raglan Plaza. Permeable paving over deep soil with bike parking and security furniture provide shade and informal resting places for people to meet or wait outside station and building entrances.

Predominantly native understorey planting provides opportunity for education through urban foraging along the kerb edge of Raglan Street. New street tree planting along Botany Road in deep soil will allow trees to mature and provide shade along the western edge of the site.

The CoS public domain is located between the kerb and the site boundary and is under Council's management. All other areas of public domain within the site boundary are publicly accessible and managed by the proponent.

NORTHERN PRECINCT | LANDSCAPE PLAN



KEY MAP

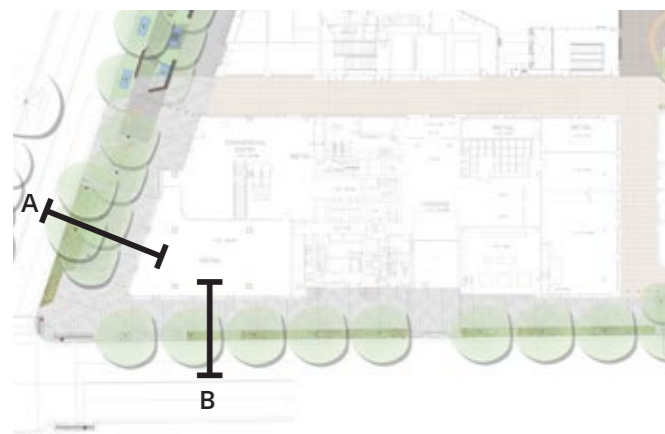


KEY

- 1 Commercial building HVM benches
- 2 New verge planting and street trees
- 3 Permeable paving and street trees
- 4 Bike Rack
- 5 Future Bus Stop
- 6 HVM Seating for station protection
- 7 Loading dock entry
- 8 Raglan Lane
- 9 Pedestrian Crossing
- 10 HVM Bollards
- 11 Licensed Seating Area
- Northern Precinct Boundary
- WMQ Site Boundary
- /// Area approved under CSSI

Section 3 / Northern Precinct Public Domain

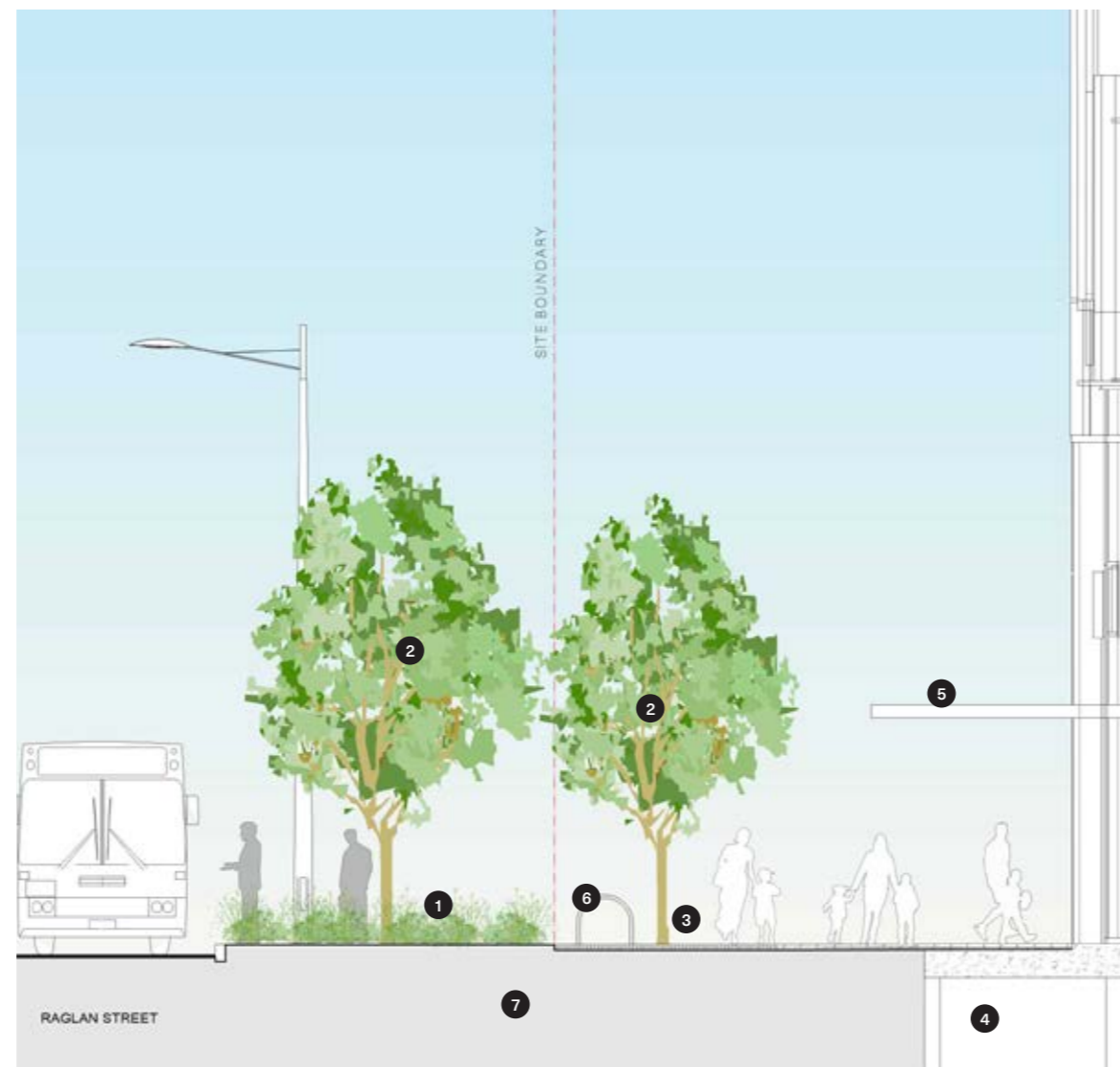
LOCATION PLAN | SECTIONS



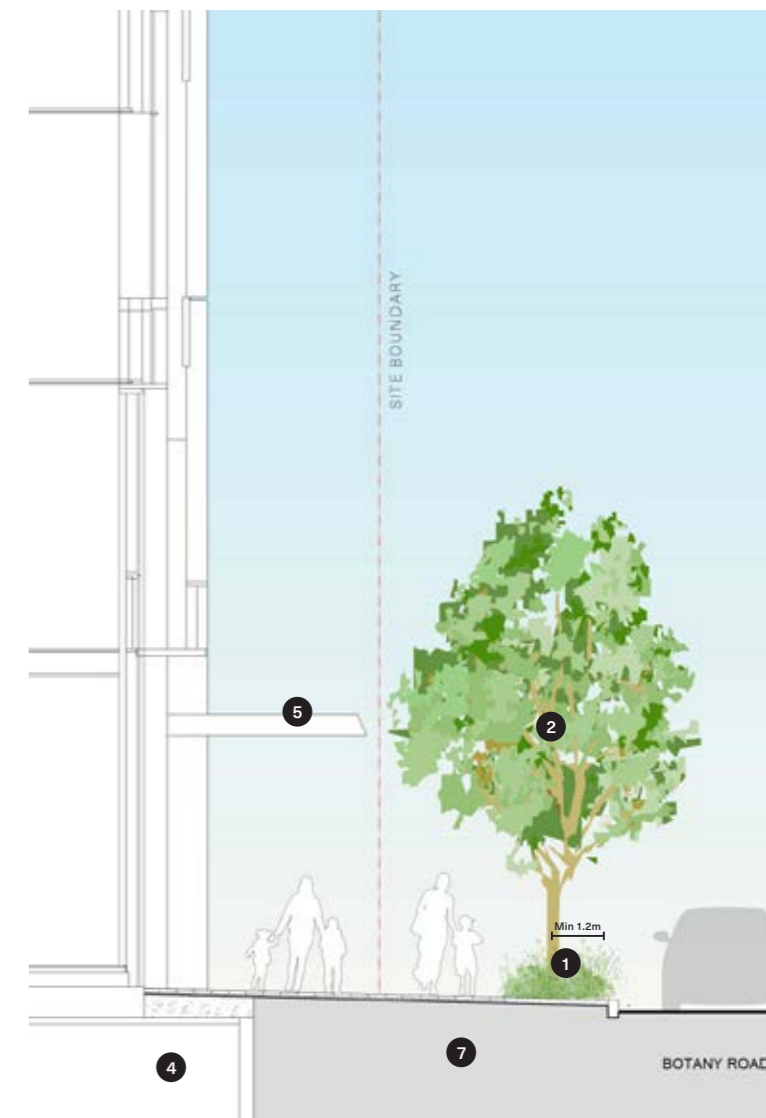
KEY

- 1 Proposed verge planting
- 2 New street trees
- 3 Permeable Paving
- 4 Basement below
- 5 Awning
- 6 Bike Parking
- 7 Deep Soil Area
- WMQ Site Boundary

SECTION A |



SECTION B |



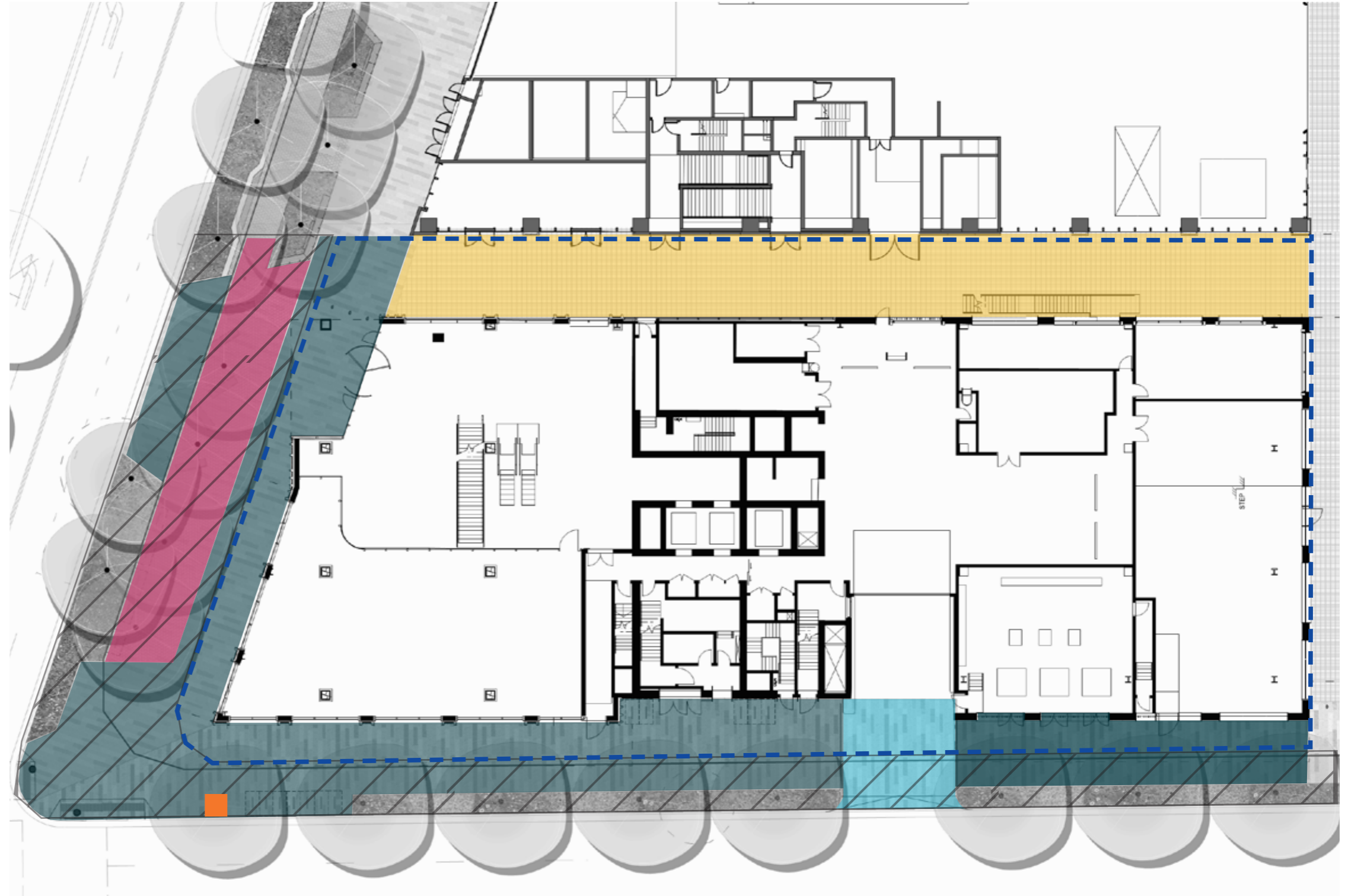
Public Domain Material Strategy

Introduction

The materials throughout draw inspiration from the character of the surrounding neighbourhoods of Redfern and Waterloo. Drawing on the robustness and timelessness of concrete and brick, the landscape spaces utilise these materials with a preference for warm tones and variation in formats to create a fine-grained response to ground plane materials.

For public domain areas that fall outside the Waterloo Metro Quarter site boundary, the City of Sydney 'Village Centre Activity Strip' approved palette of materials will be used. This includes concrete unit paver's in charcoal colour. Refer to material palette on following page.

NORTHERN PRECINCT | LANDSCAPE PLAN



KEY

- Brick Paving (Pedestrian grade)
- Eco Trix Hex Permeable Paving
- City of Sydney Concrete Unit Paving (vehicular grade)
- City of Sydney Concrete Unit Paving (Pedestrian grade)
- City of Sydney Tree Grate and surround
- Northern Precinct Boundary
- Area approved under CSSI
- WMQ Site Boundary

Public Domain Material Palette

Paving and Surface Finishes



Warm Brick Paving Pedestrian Grade



Interlocking concrete unit paver



Eco Tri Hex Permeable Paver



City of Sydney Concrete Unit Paver

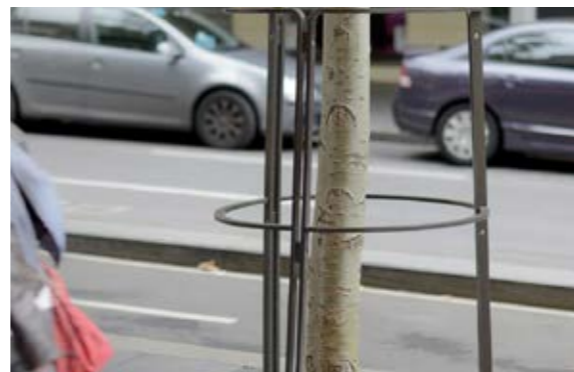
Fixtures & Furniture



Seating including backrests and handrails



Stainless steel rated bollard



City of Sydney Tree Surround



City of Sydney Tree Grate



City of Sydney Light Pole



City of Sydney Bike Rack

Planting Strategy: Northern Precinct

Introduction

Planting typology within the precinct varies between the landscape spaces. It is intended that all planting at ground level of the project, including the planting within the City of Sydney public domain, is comprised of native plant species selected for edible/usable properties. This planting would be maintained by an indigenous owned landscape maintenance firm who will run educational tours as well as maintain the planting.

Tree and understorey planting throughout the site will provide a rich diversity of endemic species. The palette has been developed to create urban ecologies which may provide habitat or food sources for native birds, bees and insects.

Refer to planting palette on the following pages for more information.

NORTHERN PRECINCT | LANDSCAPE PLAN



KEY



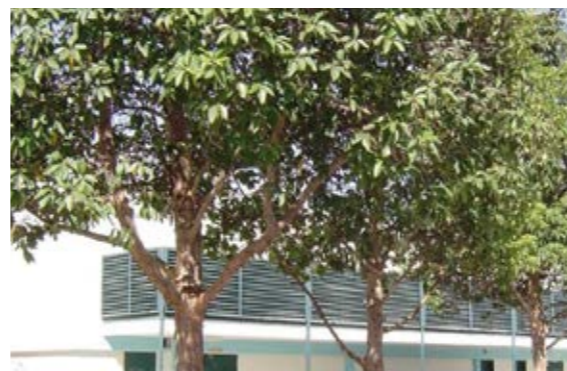
Planting Mix 1

Lophostemon confertus

Planting Palette: Northern Precinct

Street Trees			
Botanical Name	Common Name	Pot Size	Origin
Lophostemon confertus	Brush Box	400Ltr	Native

Planting Mix 1: Public Domain Understory Planting			
Botanical Name	Common Name	Pot Size	Origin
Billardia scandens	Apple Berry	200mm	Native
Atriplex nummularia	Saltbush	400mm	Native
Lomandra longifolia	Basket Grass	200mm	Native
Westringia fruticosa 'Zena'	Dwarf Coastal Rosemary	200mm	Native
Anigozanthos manglesii	Kangaroo Paw	140mm	Native
Themada australis	Tussock Grass	140mm	Native
Carpobrotus glaucescens	Pigface	140mm	Native
Dichelachne crinita	Plume Grass	200mm	Native
Dianella revoluta	Blueberry Lily	140mm	Native
Actinotus helianthi	Flannel Flower	140mm	Native



Lophostemon confertus



Billardia scandens



Atriplex nummularia



Lomandra longifolia



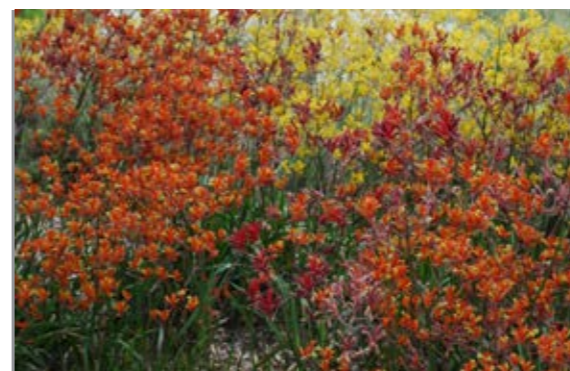
Themada australis



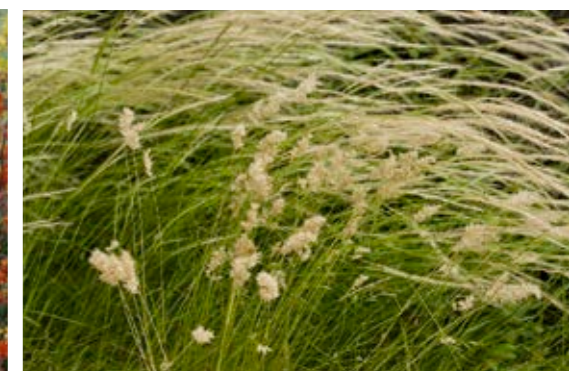
Carpobrotus glaucescens



Westringia fruticosa



Anigozanthos manglesii



Dichelachne crinita



Actinotus helianthi



Dianella revoluta

Location



Section 4

Communal Terraces & Green Roof

Communal Terraces & Green Roof

Introduction

Green roofs are proposed on all new buildings in the precinct. These include communal terraces, inaccessible green roofs and private roof terraces.

All roof terraces will be designed with regards to a site wide set of design principles outlined below, then applied to the needs of each building.

Building 1 comprises of inaccessible roof terraces on Level 2, 3 and 4 in addition to accessible terraces to Level 9 and Level 13 for commercial tenants.



PROVIDE SPACES THAT ALLOW FOR OUTDOOR DINING, OUTDOOR WORKING AND SMALL COMMUNAL GATHERINGS.



MAXIMISE LOW WATER USE NATIVE PLANT SPECIES - AT LEAST 70%



CHOOSE PLANT SPECIES THAT PROVIDE A CONTRIBUTION TO BIODIVERSITY.



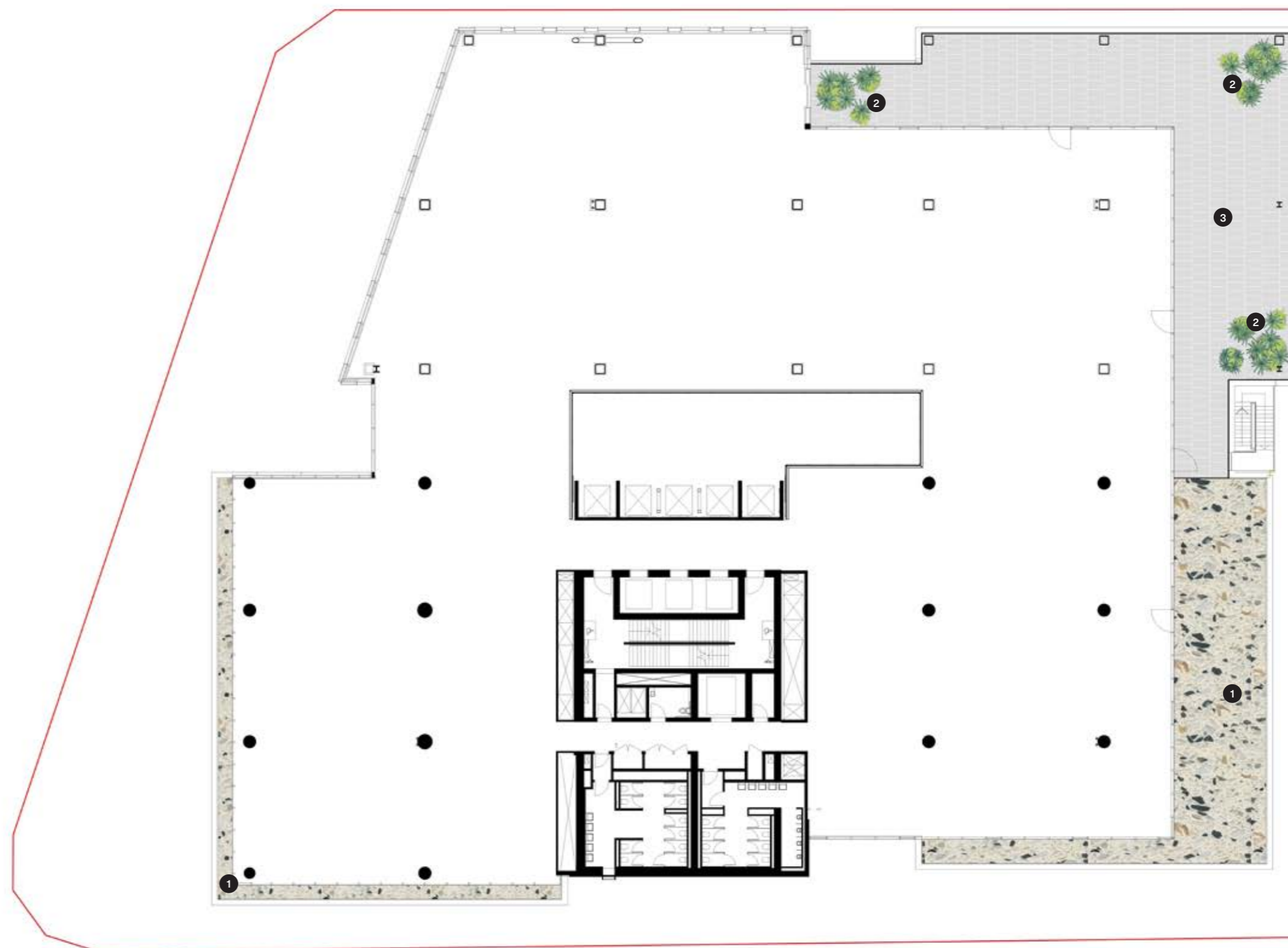
CREATE AREAS FOR RESIDENTS OR TENANTS TO GROW EDIBLE PLANT SPECIES.

Level 09

Level 9 provides a generous accessible terrace area for future commercial tenants to spill out. The space allows for flexibility in the programming and design and could accommodate a multitude of furniture types and raised planters.

KEY

- | | |
|---------------------|------------------------------|
| 1 | Inaccessible Gravel Roof |
| 2 | GRC Pot with native planting |
| 3 | Pedestal Pavers |
| — OSD Site Boundary | |

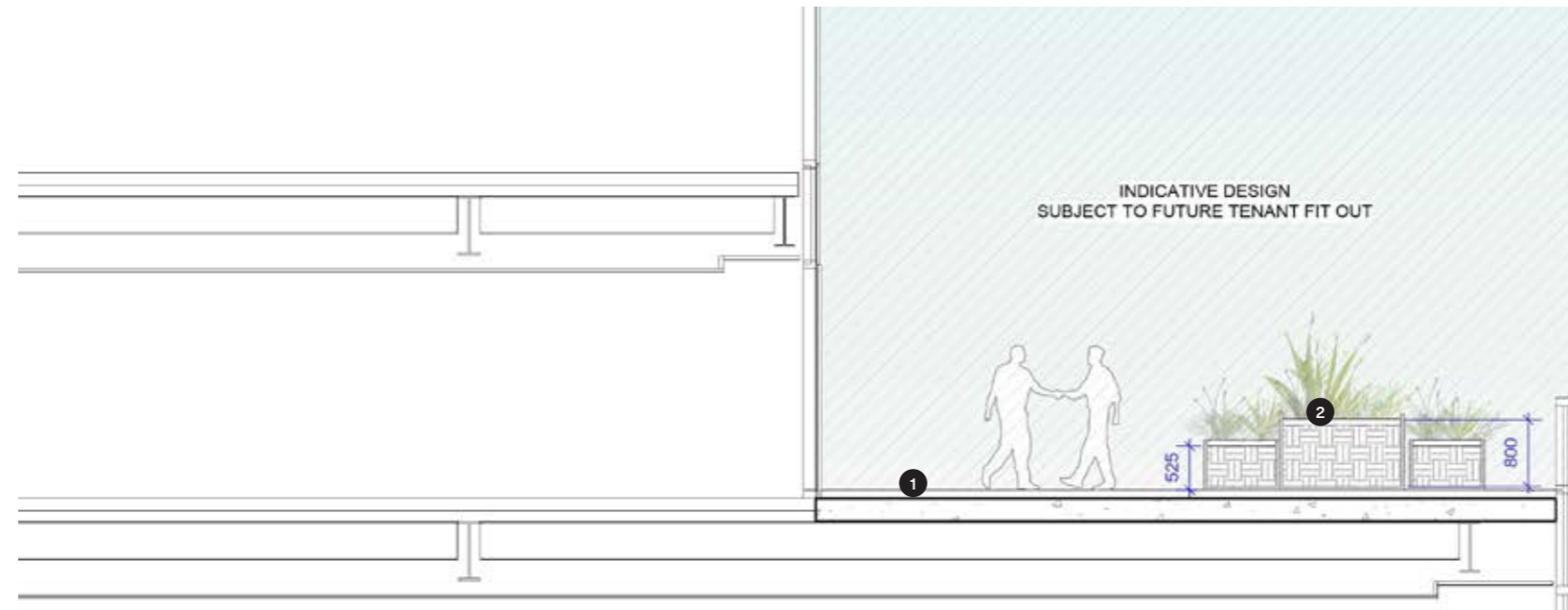


Section 4 / Communal Terraces & Green Roof

LOCATION PLAN | SECTIONS



SECTION A |



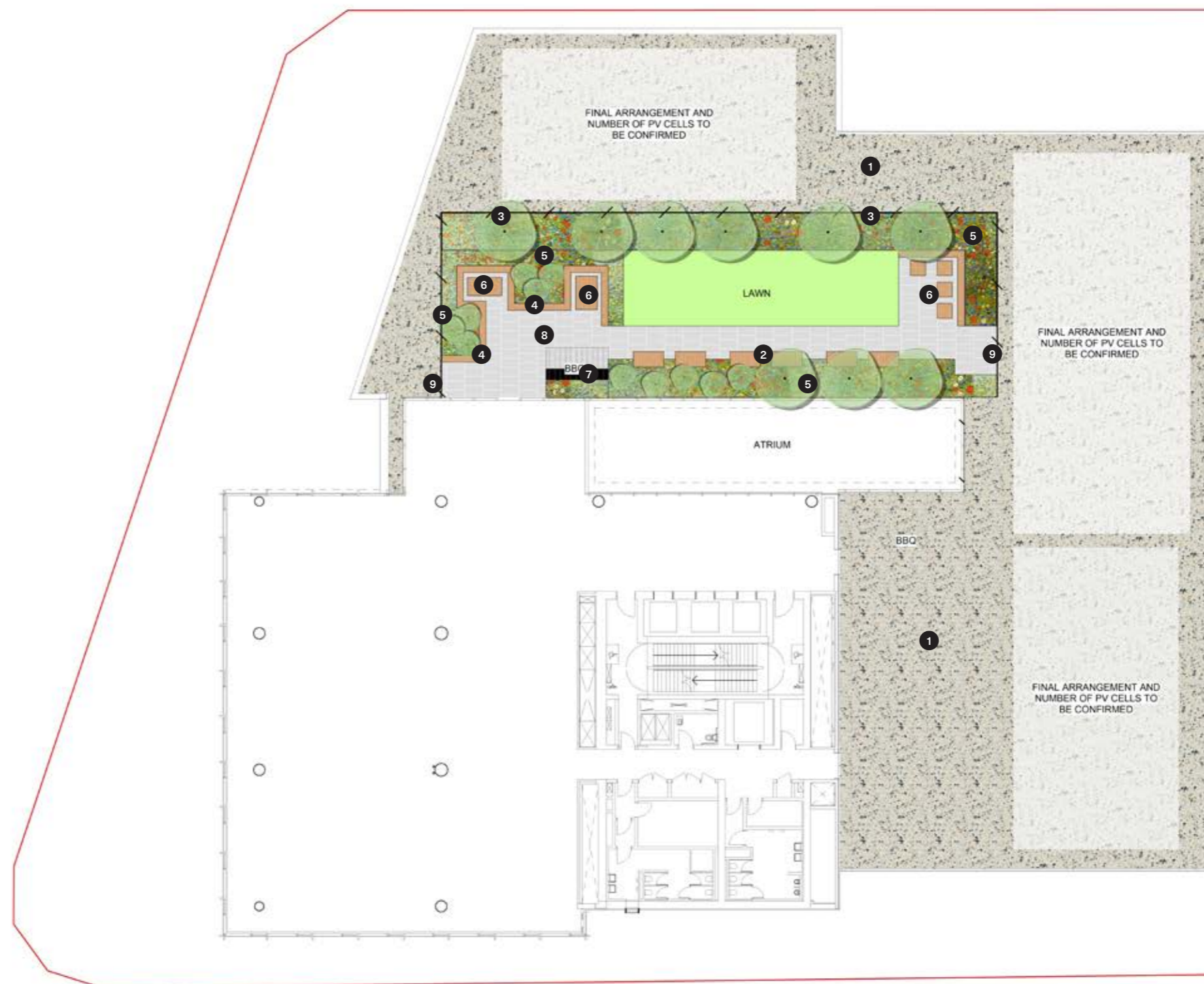
KEY

- 1 Pedestal Pavers
- 2 GRC Pot with native planting

Level 13

A large open roof terrace that maximises its generous area and provides future users of the L13 roof terrace with an open and green terrace. Featuring undulating perimeter planting with seasonal shrubs and grasses below a canopy of native trees. Refer to indicative planting schedule on page 34 for further species information.

Subject to future tenant requirements, the terrace could provide informal dining spaces that allow for various group sizes to congregate and socialise at lunch or during work events and an outdoor kitchen area to allow future tenants flexibility to hold catered events outdoor. Its generous size and north facing aspect provides a great opportunity for lawn to create a parkland escape for workers to use.

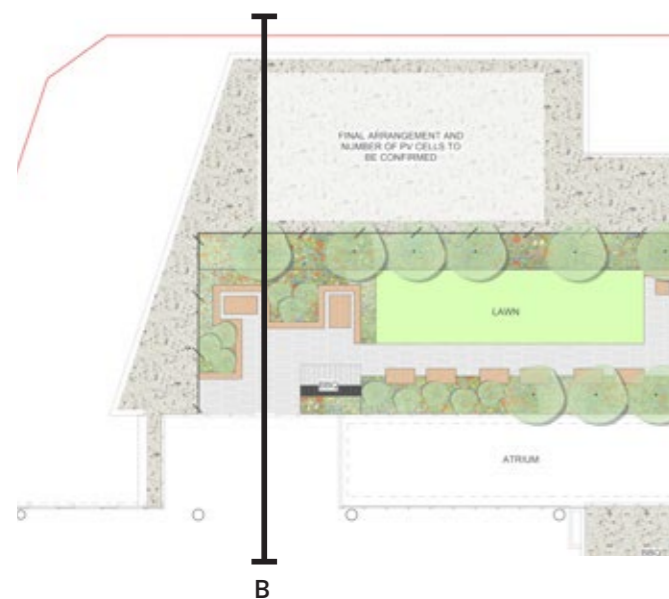


KEY

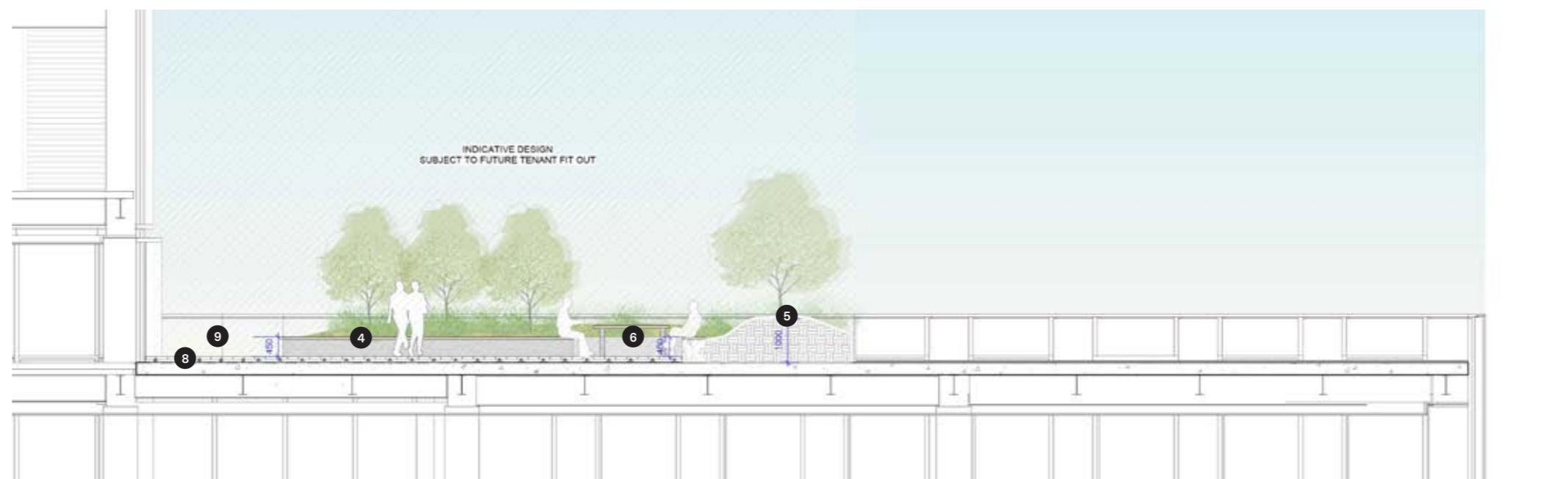
1	Inaccessible Decorative Gravel Roof
2	Timber Loungers
3	Secure 1.1m fence set within planting
4	450mm continuous planter wall
5	Mounded to 1m for trees
6	Dining and seating zones
7	Kitchen worktop and facilities
8	Paving on pedestals
9	Maintenance Access
—	OSD Site Boundary

Section 4 / Communal Terraces & Green Roof

LOCATION PLAN | SECTIONS



SECTION A |



KEY

- ① Inaccessible Decorative Gravel Roof
- ② Timber Loungers
- ③ Secure 1.1 m fence set within planting
- ④ 450mm continuous planter wall
- ⑤ Mounded to 1m for trees
- ⑥ Dining and seating zones
- ⑦ Kitchen worktop and facilities
- ⑧ Paving on pedestals
- ⑨ Maintenance Access
- OSD Site Boundary

Roof Terrace Material Palette

Hardscape and Finishes

The material palette for the commercial roof terraces comprises of robust and contemporary concrete plank pavers set on pedestals and raised edge planters.

Where seating is integrated into the planter, a timber bench and backrest will provide a comfortable and low maintenance seat at a range of scales.



Concrete pavers on pedestals



Raised planters



Integrated timber benches and raised planters



Shade structures and canopy (to architects design)

Roof Terrace Planting Palette

Planting across the roof terraces include a range of native species with a focus on flowering and bird attracting shrubs and small trees and shade tolerant species.

Small sized tree species are the most appropriate tree type for podium landscapes, as they can accommodate the weight limitations of the structural slab.

The design will provide sufficient soil volume to all small trees and shrubs on the podium, to ensure they are able to grow at an adequate rate and will be healthy specimens.



Leptospermum laevigatum



Pandorea pandorana



Pteridium esculentum



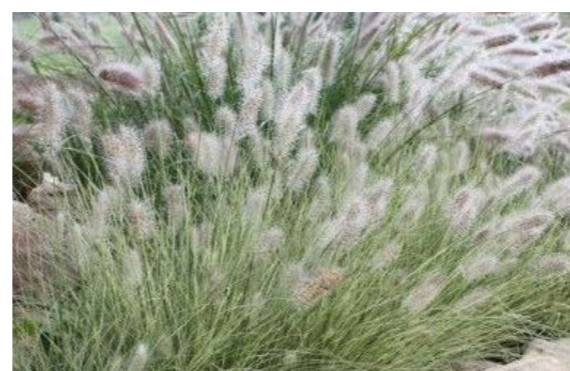
Banksia serrata



Banksia ericifolia



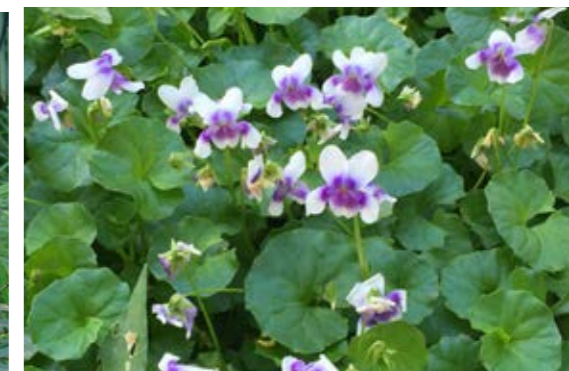
Acacia longifolia



Pennisetum alopecuroides



Dianella caerulea



Viola hederacea



Austrodanthonia setacea



Eragrostis brownii



Ficinia nodosa

Roof Terrace & Green Roof Planting Palette			
Botanical Name	Common Name	Pot Size	Origin
Leptospermum laevigatum	Coastal Tea Tree	400mm	Native
Pandorea pandorana	Wonga wonga vine	140mm	Native
Pteridium esculentum	Bracken Fern	200mm	Native
Banksia serrata	Saw Tooth Banksia	200mm	Native
Banksia ericifolia	Lantern Banksia	200mm	Native
Acacia longifolia	Golden Wattle	140mm	Native
Pennisetum alopecuroides	Fountain Grass	140mm	Native
Dianella caerulea	Blueberry Lily	200mm	Native
Viola hederacea	Common Violet	140mm	Native
Austrodanthonia setacea	Wallaby Grass	140mm	Native
Eragrostis brownii	Brown's Lovegrass	200mm	Native
Ficinia nodosa	Club rush	140mm	Native

Northern Precinct Design Guidance Compliance



Design Amenity Guidelines Compliance

PART 3C - PUBLIC DOMAIN				
3C.01	Objective	Provide publicly accessible plazas adjacent to the station entries that connect the Metro Quarter to the surrounding streets and neighbourhood	Compliant	Refer Spatial Compliance diagram
3C.02	Objective	Create a high quality, integrated, permeable and multifunctional public domain that caters for movement, recreation and social interaction	Compliant	Refer to Precinct Masterplan Diagram - page 10
3C.03	Objective	Provide good levels of solar access and amenity to the public domain	Compliant	Refer to Solar Access Diagrams in Urban Design Report - prepared by HASSELL
3C.04	Objective	The design of the public domain is consistent with Crime Prevention Through Environmental Design principles	Compliant	Refer to Access & Circulation diagram - page 14 and Lighting Strategy diagram - page 20
3C.05	Objective	Balance all forms of movement through creating a public domain which facilitates transport interchange	Compliant	Refer to Access & Circulation diagram - page 14
3C.DC.1.	Criteria	Provide 2,200m ² of publicly accessible open space within the precinct comprising the Cope Street Plaza and the Raglan Street Plaza. Space beneath cantilevered buildings can be included in the calculation of publicly accessible open space	Compliant	The proposals provide 2690m ² of publicly accessible space. Refer to Spatial Compliance diagram - page 16
3C.DC.3.	Criteria	Design of the Cope Street Plaza space underneath any building overhang is to incorporate wind mitigation	Compliant	Refer to Wind Studies by RWDI
3C.DC.5.	Criteria	The public domain and landscaping design should meet the requirements of City of Sydney Urban Forest Strategy 2013 (adopted February 2013)	Compliant	Refer to Planting Palette - page 27
3C.DC.7.	Criteria	Publicly accessible areas are to be designed to allow access as required by DDA requirements with consideration of use for people of all abilities	Compliant	Refer to landscape plans and DDA report by Morris Goding
3C.DC.10.	Criteria	Public domain lighting in areas under Council's control shall be in accordance with City of Sydney's Sydney Lights Code (March 2015)	Compliant	Refer to Lighting diagram - page 20
3C.DC.11.	Criteria	Lighting provided to the plazas and publicly accessible spaces within the development should comply with AS4282-1997	Compliant	Refer to Lighting diagram - page 20
3C.DG.01.	Guidance	The Cope Street plaza is to include: - An open, paved area that supports a range of informal passive recreation activities	Compliant	Refer to SSDA10437 Southern Precinct Landscape Report for Cope Street Plaza design
3C.DG.02.	Guidance	The Raglan Street plaza is to include: - A vibrant pedestrian focused public space that engages with the existing local character and fine grain of the retail strip opposite	Compliant	Refer to SSDA10440 Northern Precinct for Raglan Street Plaza design
PART 3D - STREETS, LANES AND FOOTPATHS				
3D.01	Guidance	Provide high quality materials and finishes in the public domain that respond to the character of the local area	Compliant	Refer to Public Domain Material palette - page 25
3D.02	Guidance	Expand the public domain by considering the boundary interface with the Waterloo Congregational Church	Compliant	Refer to SSDA10437 Southern Precinct Landscape Design Report
3D.03	Guidance	Create visual interest and reflect the character of the area through the selected materials for the public domain	Compliant	Refer to Public Domain Material palette - page 25
3D.DC.1.	Criteria	Provide a through-site pedestrian link from Cope Street to Botany Road that provides a clear, safe, direct and convenient connection from the metro station to the bus interchange	Compliant	Refer to SSDA10437 Southern Precinct Landscape Design Report
3D.DC.2.	Criteria	The through-site link should Have a minimum width of 6m and have a clear height of at least 6m	Compliant	Refer to Pedestrian Accessways diagram - page 13
3D.DC.2.	Criteria	The through-site link should align with breaks between buildings so that views are extended and there are is less sense of enclosure	Compliant	Refer to Pedestrian Accessways diagram - page 13
3D.DC.2.	Criteria	The through-site link should be clearly distinguished from vehicle access ways	Compliant	Refer to Pedestrian Accessways diagram - page 13
3D.DC.2.	Criteria	The through-site link should include materials and finishes such as paving materials, tree planting and furniture generally consistent with adjoining streets and public spaces and be graffiti and vandalism resistant	Compliant	Refer to Public Domain Material palette - page 25
3D.DC.10.	Criteria	Respond to and complement the City of Sydney's public domain requirements for works on Council land	Compliant	Refer to Public Domain Material palette - page 25
3D.DC.12.	Criteria	Street furniture is to be consistent with the Sydney Streets Design Code	Compliant	Refer to Public Domain Material palette - page 25
3D.DC.14.	Criteria	Where feasible, incorporate water sensitive urban design techniques such as landscaped swales to improve the quality of groundwater and water entering the waterways and tree bays	Compliant	OSD Tank and water filtration proposed
3D.DG.01	Guidance	The through-site link should be direct and accessible to all, have a clear line of sight between public places and be open to the sky as much as is practicable	Compliant	Refer to Pedestrian Accessways diagram - page 13
3D.DG.01	Guidance	The through-site link should assist in guiding people along the link while enabling long sightlines	Compliant	Refer to Pedestrian Accessways diagram - page 13
		Different paving materials or patterns can be used to denote significant spaces of the public domain such as the publicly accessible plazas		

Section 5 / Design Guidance Compliance

3D DG 03	Guidance	Street furniture should be co-located with trees where possible to avoid clutter and create focus points for community activity	Compliant	Refer to General Arrangement - page 22
3D DG 04	Guidance	Consultation should be undertaken with the Waterloo Congregational Church to investigate opportunities to integrate the curtilage of the church with the public domain and landscape design	Compliant	Consultation has commenced and is ongoing
PART 3E - TREE CANOPY COVER				
3E 01.	Objective	Mitigate the impacts of urban heat island effect through the provision of tree planting and soft surface areas.	Compliant	Refer to Tree Canopy diagram - page 17
3E 02.	Objective	Enhance the biodiversity of the site through providing a range of native species and opportunities for urban habitat.	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC1.	Criteria	New street tree planting must be consistent with the City of Sydney's Street Tree Master Plan 2011 (updated 2015), Park Tree Management Plans and the Landscape Code	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC2.	Criteria	The development must achieve the following minimum tree canopy cover targets 23% overall canopy cover (i.e. the combined canopy area of all trees contained within the site and adjacent streets measured to the centre line of the roads)	Compliant	The proposals achieve a tree canopy cover of 25.7% inside the WMQ boundary. Refer to Tree Canopy diagram - page 17
3E DC2.	Criteria	The development must achieve the following minimum tree canopy cover targets 50% street canopy cover (i.e. the combined area of all tree canopy contained within the road reserve including footpaths and pedestrian areas and measured from the property boundary to the centreline of the adjoining roads)	Compliant	The proposals achieve a street tree canopy cover of 55% Refer to Tree Canopy diagram - page 17
3E DC3.	Criteria	A secondary alignment of trees are to be provided set further back from Botany Road in front of the central podium near the bus stop	Compliant	Refer to Tree Canopy diagram - page 17
3E DC4.	Criteria	New habitat features including trees, shrub and ground cover vegetation, waterbodies, rockeries and green roofs and walls are to be included, wherever possible	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC5.	Criteria	Landscaping is to comprise a mix of locally indigenous tree, shrub and groundcover species as outlined in City's Landscape Code. Where this is not possible, it is preferred that plants native to Australia are used	Compliant	Refer to Planting Palette & Schedule - page 27
3E DC6.	Criteria	Shrubs are densely planted and trees are to be well spaced, as outlined in the City's Landscape Code	Compliant	Refer to GF Plans & Planting Palette - page 27
3E DC7.	Criteria	Awnings and canopies are to be located and designed to maximise tree canopy	Compliant	Refer to GF Plans
3E DC8.	Criteria	Tree planting details are to specify horizontal clearance to awnings and buildings and tree spacing	Compliant	Refer to sections
3E DC9.	Criteria	Centreline of new trees along Botany Road should be a minimum of 1m back from the front of the kerb and up to 1.5m from the front of the kerb subject to services investigations	Compliant	Refer to Tree Canopy diagram - page 17
3E DG 1.	Guidance	Consult with City of Sydney and obtain their agreement for any tree planting within Council owned land	Compliant	Consultation has commenced and is ongoing
PART 3F - TREE PLANTING SPECIFICATIONS				
3F 01.	Objective	To create a safe welcoming and healthy place to live, high quality public spaces, and a sustainable and adaptable urban environment	Compliant	Refer to Planting Palette & Schedule - page 27
3F 02.	Objective	Provide a resilient, healthy and diverse urban forest	Compliant	Refer to Planting Palette & Schedule - page 27
3F 03.	Objective	Provide an integrated long-term strategy that promotes trees as critical infrastructure and assets	Compliant	Refer to Tree Canopy diagram - page 17
3F 04.	Objective	Retain and protect existing trees and canopy cover.	Non-compliant	Existing trees removed or increased canopy cover to be achieved
3F DC1.	Criteria	Any existing trees proposed to be retained are to be assessed and then protected as per the requirements outlined in the Australian Standard 4970 – Protection of Trees on Development Sites	Compliant	No trees retained
3F DC2.	Criteria	Overhead power lines and communication cables are to be under-grounded within all streets adjacent to the Metro Quarter to remove the current conflict between overhead cabling and the existing and proposed trees	Compliant	
3F DC3.	Criteria	If existing trees occur within the planned under grounding routes then the routes shall be modified to avoid incursions into the tree(s) calculated Tree Protection Zones, as defined under Australian Standard 4970 – Protection of Trees on Development Sites. Where this cannot be reasonably accommodated, alternative methods of construction must be used such as under-boring, directional drilling or non-destructive trenching to install the cabling without impact to the trees' health or stability	Compliant	All existing trees to be removed - new trees to be coordinated with new electrical cables
3F DC4.	Criteria	All new trees shall be installed in accordance with new tree planting requirements contained in Appendix A	Compliant	Details to be provided in future Public Domain Plan submission
3F DC5.	Criteria	Where trees are planted within a potentially constrained soil environment (on-structure), appropriate soil volumes are to be provided to ensure maximisation of tree canopy spread and height	Compliant	Refer Deep Soil Diagram - page 15
3F DC6.	Criteria	Consult with the City of Sydney in relation to tree planting in the public domain, comprising the public footpaths around the Metro Quarter	Compliant	Consultation has commenced and is ongoing
3F DC7.	Criteria	All new street tree planting shall be a minimum of 200L container sizes with this increased to 400L for the key feature trees being preferred. Sizes of >800L should be considered where suitable and quality advanced stock is available	Compliant	Refer to Planting Palette & Schedule - page 27

Section 5 / Design Guidance Compliance

3F.DC7.	Criteria	All trees shall be grown to the minimum standards of AS2303 – 2015 Tree Stock For Landscape Use with certification provided by the supplying nurseries. Trees shall be true to type and the species and cultivars specified.	Compliant	Details to be provided in future Public Domain Plan submission.
3F.DC7.	Criteria	Tree planting ideally should be undertaken in either autumn or winter. This will greatly increase the success of the planting and reduce the establishment maintenance burdens.	Compliant	Details to be provided in future Public Domain Plan submission.
3F.DC7.	Criteria	Surrounding pavements and tree grates shall allow for proper expansion of the trees base over time.	Compliant	Details to be provided in future Public Domain Plan submission.
3F.DC7.	Criteria	Trees shall be planted a minimum of 675mm from the back of adjoining kerbs. Distances greater than are 1000mm preferred.	Compliant	Details to be provided in future Public Domain Plan submission.
3F.DC7.	Criteria	Trees shall be transported, lifted and planted in a manner that limits any possibility of physical damage.	Compliant	Details to be provided in future Public Domain Plan submission.
3F.DC7.	Criteria	Trees shall be regularly maintained for a minimum of 12 months from the date of planting to ensure adequate establishment maintenance. This is to include pest and disease monitoring and control, watering and timely replacement if required.	Compliant	Details to be provided in future Public Domain Plan submission.
PART 3G - WIND				
3G.O1.	Objective	Mitigate potential wind impacts and ensure adequate levels of comfort are achieved in the public domain for intended activities.	Compliant	Refer to Wind Studies by RWDI.
PART 3I - STREET ACTIVATION				
3I.DC5.	Criteria	Provide wider footpaths along Botany Road adjacent to the bus stops that accommodate pedestrians and encourage retail activation.	Compliant	Refer to GF Plans and Pedestrian Accessways diagram - page 14.
PART 3N - PEDESTRIAN AND CYCLE NETWORK				
3N.O1.	Objective	Prioritise walking and cycling trips in and around the Metro Quarter over vehicles.	Compliant	Refer to Access & Circulation diagram - page 14.
3N.O2.	Objective	Manage potential conflict between cyclists and pedestrians through the design of the public domain and locations of bike parking.	Compliant	Refer to Access & Circulation diagram - page 14.
3N.O3.	Objective	Provide a pedestrian network that aligns with key pedestrian desire lines and is integrated with the active frontages.	Compliant	Refer to Access & Circulation diagram - page 14.
3N.DC1.	Criteria	Provide generous footpath widths that can accommodate the forecast pedestrian flows from the metro station.	Compliant	Refer to GF Plans and Pedestrian Accessways diagram - page 13.

ASPECT Studios